

pump for all, all for pump



KSQ9001:2009/ISO9001:2008

Oil Lubrication PUMPS

Centralized Oil Lubrication system

Auto lubrication pumps

Manual lubrication pumps

Air-Oil lubrication pumps

Distributors

Accessories & Fitting



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Oil Lubrication pumps

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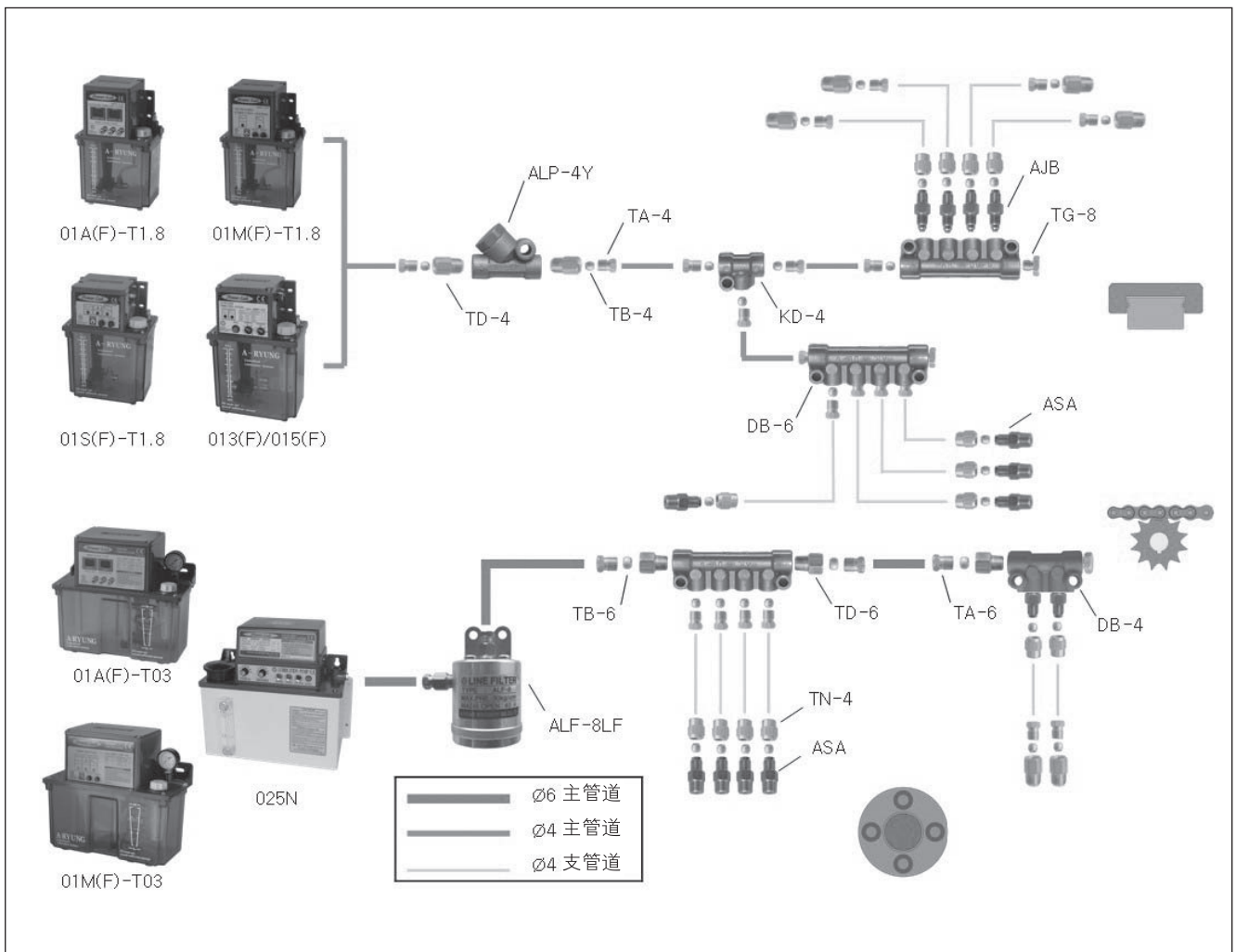
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Oil Lubrication pumps



Resistive oil supply systems 阻抗(比例)式给油方式

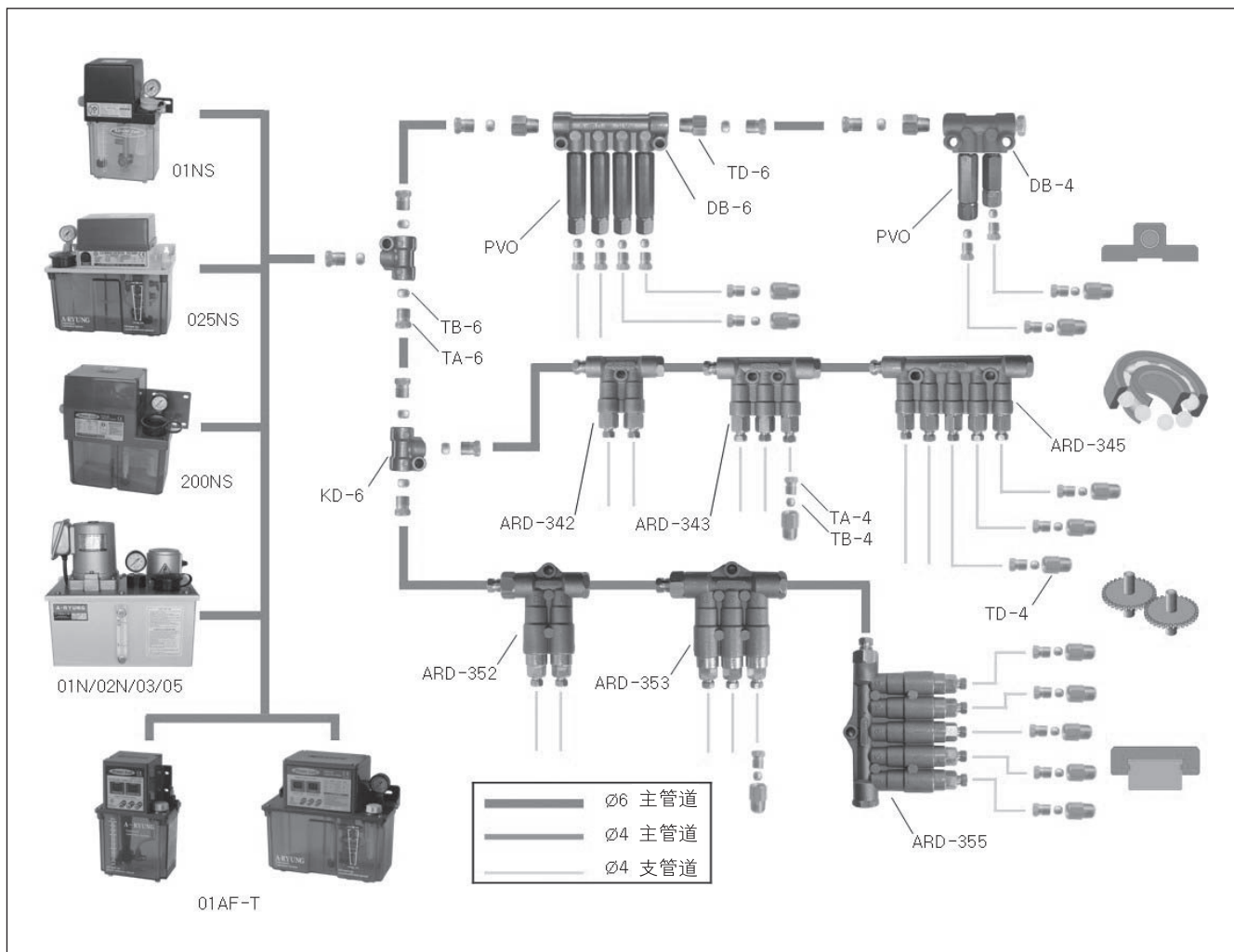
- 比例式泵是阻抗系统的产品。这系统是润滑每个点或通过控制端口流动阻力单位比例或调整或多或少的石油。
- The resistive system have two types of measuring system pump. This system is to lubricate every point by controlling port of distributor or resistance of flow unit with proportion or adjusting much or less of the oil.
- 每个吐出口的流量和分发成正比，流量通过分配器的每个给油口供给。
- The discharge volume of each outlet is proportional and distributes each point through the installing distributor.
- 流动单元(代码03号~4)是AJB类型和ASA类型的总和，随着连接每一个润滑孔的代码增加数量的配件增加了两次放电容量。
- The flow unit (Code No. 03 ~ 4) have two types of AJB type combined distributor and ASA type attached every lubricating ports. The code number increasing on the fittings increases the discharge volume two times.



Oil Lubrication pumps

Measuring oil supply systems 定量式给油方式






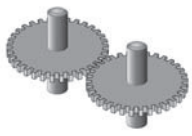


- 定量式润滑给油系统是定量泵与定量分配器组合使用，这种方式是把从吐出出口流出的润滑油通过分配器定量，然后再给每个供油口供油。
- 定量分配器的吐出量根据Adjust Nipple决定，刻印在Adjust Nipple数字越大吐出的流量就会增加。
- 为了与定量式分配器组合使用需要安装脱压阀后间歇式运转。泵如果不是间歇式运转而是连续运转的话，就不能排出管内的压力，定量分配器就无法进行下一步运转，因而也不会产生吐出。
- 为了能够使泵间歇式运转，应该内置控制器使用或者与机床上的控制器连接使用。
- The measuring lubrication system should be used with measuring pump and distributors. This system lubricates to the points by measuring setting discharge volume.
- The volume is decided adjusting nipples, and the amount of lubrication is increased by nipple number increasing.
- The venting valve have to attached on the pump to assemble the measuring distributor. The pump should operates as intermittent method. If not, the distributor can move because the air is not removed in the pipe.
- To operate the pump with intermittent method, the pump have to be installed a controller in pump itself or be attached the controller on the machine.





Measurement of oil supply 润滑给油量计算方法

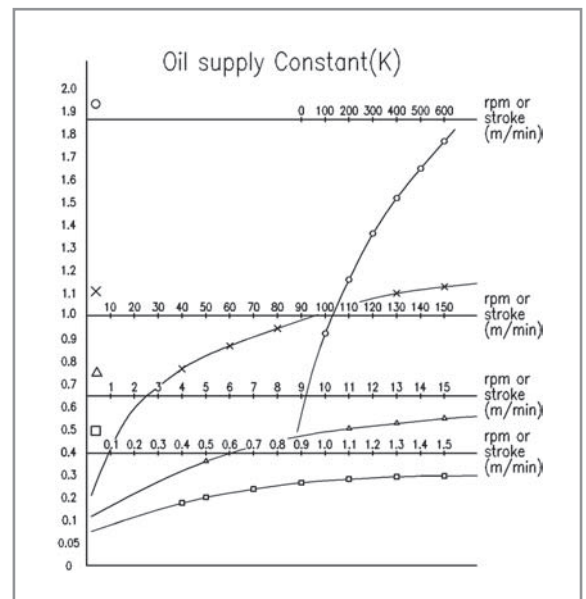
1. Necessary oil supply of total loss formula Q = Necessary oil supply (cc/hour) 流量
 需要量计算方法 K = Oil supply constant (See table below) 油的供给
 The unit of width and length is (mm) 指数单位

Oil supplying place	Calculation formula	Oil supplying place	Calculation formula
• Bearing 	$Q = 0.1/25.4 \times \text{Diameter 직경} \times \text{Row pieces 열수} \times K$ (Ball, Roller, Needle bearing)	• Chain 	$Q = 0.05/25.4^2 \times \text{Length 길이} \times \text{Width 폭} \times K$
• Sliding bearing 	$Q = 0.15/25.4 \times \text{Shaft dia 축경} \times \text{Journal length 길이} \times K$	• Ball Bearing way 	$Q = 0.03/25.4 \times \text{Length 길이} \times \text{Row pieces 열수} \times K$
• Plane sliding 	$Q = 0.01/25.4^2 \times \text{Length 길이} \times \text{Width 폭} \times K$ (Length = Stroke)	• Gear 	$Q = 0.3/25.4 \times \text{Pitch} \times \text{Circle diameter 직경} \times \text{Teeth width 기어 폭} \times K$
• Cylindric sliding 	$Q = 0.15/25.4 \times \text{Diameter 직경} \times \text{Length 길이} \times K$	• Cam 	$Q = 0.08/25.4^2 \times \text{Contact circumference 접촉원주} \times \text{Width 폭} \times K$

2. Necessary oil supply of rotating formula

(Return type of lubricating oil, Experienced formula in Hodson's sliding bearing)
 通过经验来计算方法

• Sliding bearing $Q = 3 \times r^3 \times N \times 10^{-5}$ Q: Minimum oil supply 最低供油量(Gallon/min) R: Radius of shaft(inch) 轴半径 N: Rotating speed(rpm) 回旋数	• Gear $H : (15HP \cdot k) \times 10.6 = 159HP \cdot k$ H: Heat capacity produced 发生热量(kcal/min) HP: Transmit Horsepower 1.5: Constant 系数 10.6: HP=10.6(kcal/min) k: Coefficient of heat loss 热损失系数 -Normal: 0.015~0.018 标准 -Precision gear: 0.008~0.012 精密齿轮 $Q = H / 427rc\Delta t$ Q: Oil supply (m ³ /sec) 供油量 r: Specific gravity (kg/m ³) 比重 c: Specific heat (kcal/kg,°C) 那重 Δt: Raising temperature(°C) 温度变化
• Rotating bearing $Q = (325 \times 10^{-5} / \Delta t) D n F$ Q: Oil supply (l/min) 供油量 Δt: Raising temperature(°C) 温度变化 D: Shaft diameter(mm) 轴外径 f: Coefficient of friction 摩擦系数(0.001~0.002) n: Rotating speed(rpm) 回旋数 F: Load(kg) 荷重	



※ This calculating formula is the most correct data when specific heat of oils is 0.47kcal/kg, °C
 此计算方式以油的温度0.47kcal/kg为基准。



Oil Lubrication pumps

Description of Main Function 主要部品功能

■ Float switch(液位传感器)

由于安装了液位传感器，当泵容器的液面达到最低时开关就会感知，即处于“ON”的状态。此开关可连接设备的控制器使用，利用其特点可以做液位不足警报及设备停止警报等。

使用电压：AC250V, DC200V 以下
粘度用量：AC0.33A, DC0.5A

■ Pressure switch (压力传感器)

此装置在首次使用时，可以感知压力的设定及运转是否正常，将会处于“ON”的状态。此开关可连接设备的控制器使用，利用其特点可以做液位不足报警及设备停止报警灯。

设定压力：PS-1.5(0.15MPa)
PS-11(1.1MPa)
使用电压：AC 250V/DC 32V
1.75A이하

■ 运转时间设定

此泵在运转时会使电机产生过高的温度，一次必须要设定间隔时间，如果间隔时间比吐出时间短时产生的高温，由于泵内设有安全装置，使电机会自动停止工作，在温度下降后，电机会自动重新启动进行运转。

■ Relief Valve(压力调节阀)

压力调节范围：
2kgf/㎡ --- 20kgf/㎡

■ FEED button 作用 (手动给油)

在正常运行的状态下，与设定时间无关，当按“FEED”键时，液体就会在按键时间内正常吐出。此按键在首次排管时排出管内空气并且可以利用手动方式进行电动供油。但是只有在泵体内部安装的FEED Button switch 触点与设备控制器的电源连接时，此作用才可以发挥。

■ Built-in Float Switch:

The Contact Point indicates ON when the oil surface is lower than the lowest limit line by perceiving the drop of oil surface of Reservoir.

Maximum Use Voltage:
AC 250V / DC 200V
Capacity of Contact Point:
AC 0.33A / DC 0.5A

■ Built-in Pressure Switch:

The Contact Point indicates ON when pressure reached the certain pressure by perceiving the pressure of Pump. This device perceives whether Pump operates normally or oil-leakage occurs in Pipe.

Applicable Pressure:
PS-1.5(0.15MPa)
PS-11(1.1MPa)
Maximum Use Voltage:
AC 250V / DC 32V
Under 1.75A

■ Setting of Operation Time:

This Pump must not be operated continuously. In case much heat is generated in Motor by long-time operation, Motor is set to stop by bimetal which is equipped inside Motor, and it operates normally when the heat cools down again. Please set sufficient interval time for the most suitable operation.

■ Relief Valve:

Adjusting the Pressure of Pump
Adjustment Range:
0.2 MPa ~ 2.0 MPa

■ Feed Button Switch:

It is used when oil is supplied manually. Pump operates when Feed Button Switch is pressed regardless of setting time. When Pipe is set and initiative Pump is operated, the Feed Button Switch must be pressed necessarily so that oil can be filled inside the Pump and Air is completely eliminated. Then connect to Distributor.

Viscosity 精度

■粘度：由于温度不同其粘度会发生很大变化，所以请参照以下随温度变化，粘度变化参数表选择适当的粘度。如果粘度过高，泵不能正常运行。

■ As the viscosity would be sharply changed by the temperature, proper viscosity of using oil should be applied according to the viscosity applying chart.

动精度随温度变化 (cst)

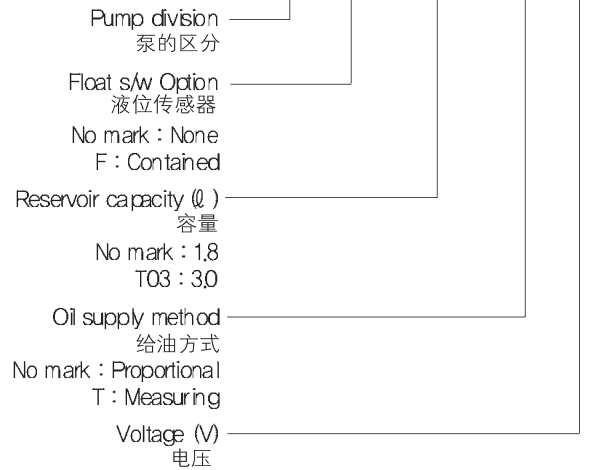
Temperature (°C)	VG32	VG46	VG68	VG100	VG150
-30	3250	-	-	-	-
-20	1170	3600	8000	-	-
-10	440.0	1270	2500	4500	-
0	240.0	520.0	950.0	1600	3570
10	135.4	261.3	433.0	772.3	1236
20	76.1	134.0	212.0	356.6	553.2
30	46.4	75.7	115.0	183.8	277.0
40	30.2	46.3	67.9	103.8	152.3
50	20.8	30.2	43.0	63.2	90.5
60	15.0	20.8	28.8	41.0	57.4
70	11.2	15.0	20.3	28.1	38.5
80	8.6	11.2	14.7	20.1	27.0
90	6.9	8.7	11.3	14.9	19.7
100	5.6	6.9	8.8	11.4	14.9
110	4.6	5.6	7.1	9.0	11.6
120	3.9	4.6	5.8	7.2	9.2
130	3.3	3.9	4.8	6.0	7.5
140	2.9	3.3	4.1	5.0	6.2
150	2.5	2.9	3.5	4.2	5.2
160	2.2	2.5	3.0	3.6	4.5
170	2.0	2.2	2.7	3.2	3.9



AMGP-01A(F) Series



AMGP - 01A F - T03 - T 110

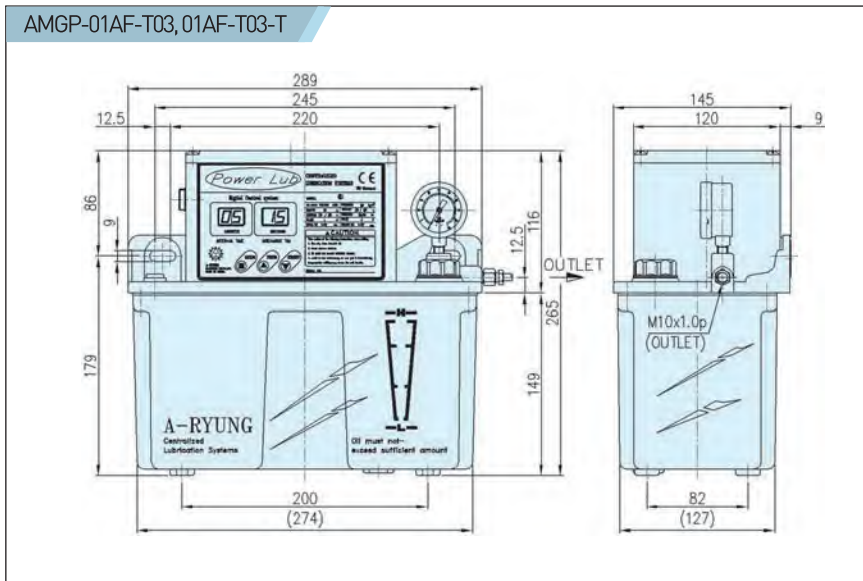
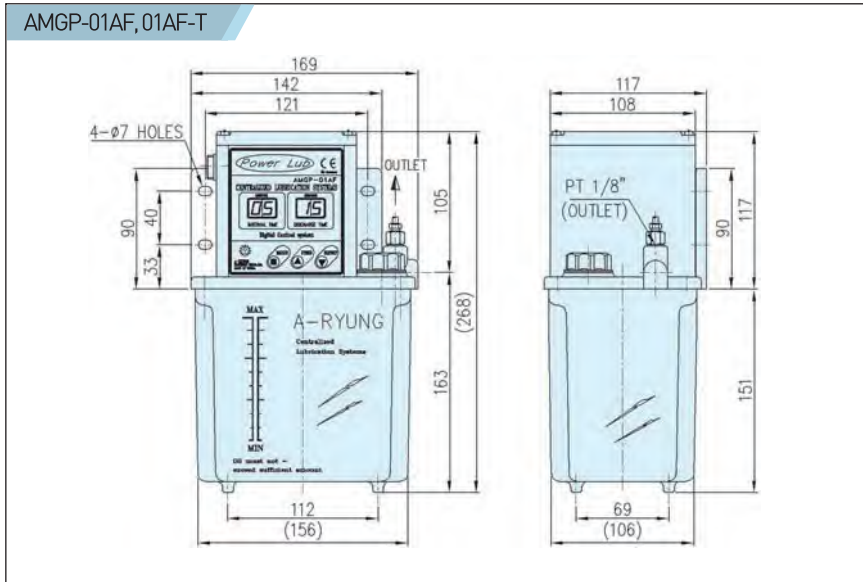


- AMGP-01A系列润滑油泵内设置的按钮式数字计数器可以将液体间歇性的进行供给。AMGP-01A(F)型与比例式分配阀 (DB type) 组合使用, AMGP-01AF-T型与定量式分配阀 (ARD-340, 350.PVO型) 组合使用。
- 数字控制器通过在泵体前面的操作面板上用数字及文字加以标识, 使得外观美观且容易识别泵是否有异常情况。
- 由于间隔时间和吐出时间的设定方法方便准确, 因此可要求量进行润滑供油。
- 有可以感知液面不足而发出警报的装置, 可连接外部控制器使用。
- 泵前面安装有FEED按钮, 当首次排出管时, 可以很容易的排出关内的空气, 同时可以利用它进行点动供油。
- 广泛适用于机床设备, 印刷设备, 食品设备, 纺织设备, 注塑设备及各种产业设备等等。
- It is an intermittent pump containing the digital timer inside to control the discharge volume correctly. There are two types, one is used to be combined with resistive distributors(DB type), the other is to be combined with measuring distributors (ARD-340, 350, PVO type).
- It has digital controller to check easily the operation with indication of letters and numbers on the controller. the surface is beautiful and easy operation checking.
- It is possible to lubricate by setting intervals and discharge time easily and precisely.
- This pump has a terminal box to contact outside controller to alarm the oil shortage. (Option)
- As the pump is installed feed button switch inside of pump, it is easy to remove the air and to operate by manual.
- This pump is mainly used machine tools, printing, foods, fabrics, injection machine and various industrial machine.

Type	Discharge volume 流量 cc/min	Working pressure 使用压力 MPa	Pressure range 压力范围 MPa	Reservoir capacity 容器 ℓ	Viscosity 使用黏度 cSt	Outlet 吐出口 PT	Net weight 重量 kg	Phase 1 Ø, Poles 2P			
								Motor Output 功率 W	Fre- quency 频率 Hz	Rated voltage 电压 V	Current 电流 A
01A 01AF	85	0.8	0.2~1.7	1.8	30~500	1/8" (Ø4)	2.8	15	50	100/200	1.4/0.7
	100								60	110/220	1.2/0.6
01AF-T	85	1.7	0.2~1.7	1.8	30~500	1/8" (Ø4)	2.8	15	50	100/200	1.4/0.7
	100								60	110/220	1.2/0.6
01AF-T03	125	0.8	0.2~2.0	3.0	30~1000	1/8" (Ø6)	4.7	25	50	100/200	2.0/1.0
	150								60	110/220	1.8/0.9
01AF-T03-T	125	1.7	0.2~2.0	3.0	30~1000	1/8" (Ø6)	4.7	25	50	100/200	2.0/1.0
	150								60	110/220	1.8/0.9

Oil Lubrication pumps

External dimension 外形图

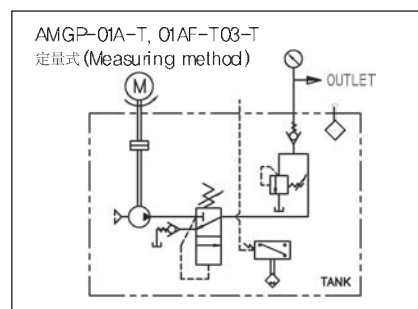
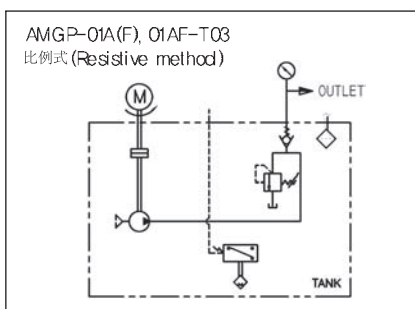


Applications 适用

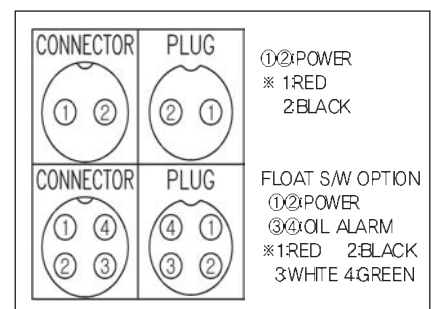
- 使用液体: Oils
- 推荐用油: 冬令时 → 32cSt 以下
夏令时 → 68cSt 以下
- 材质
电器控制箱及控制箱盖: Plastic
油箱: Plastic
齿轮泵: Steel
轴向: Plastic/ZnDC
- 使用温度: 80°C 以下
- 供油方式
比例式: AMGP-01A, 01AF, 01AF-T03
定量式: AMGP-01AF-T, 01AF-T03-T
- 控制方式: Digital type
- 间隔时间: 1~99min
- 吐出时间: 1~99sec
- 压力表: PG-35K
(AMGP-01AF-T03)
- 液位传感器: FS-A(선택사항)
- 保险丝: 0.3A

- Type of fluid: Oils
- Recommended oil
Winter → below 32cSt
Summer → below 68cSt
- Material
Case & Cover: Plastic (ABS)
Tank: Plastic (ABS)
Gear pump: Steel
Shaft guide: Plastic/ALDC
- Temperature: below 80°C
- Oil Supply method
Proportional:
AMGP-01A, 01AF, 01AF-T03
Measuring:
AMGP-01AF-T, 01AF-T03-T
- Controller method: Digital type
- Interval time: 1~99min
- Discharge time: 1~99sec
- Pressure Gauge: PG-35K
(AMGP-01AF-T03)
- Float switch: FS-A(Option)
- Fuse: 0.3A

Circuit diagram 回路图

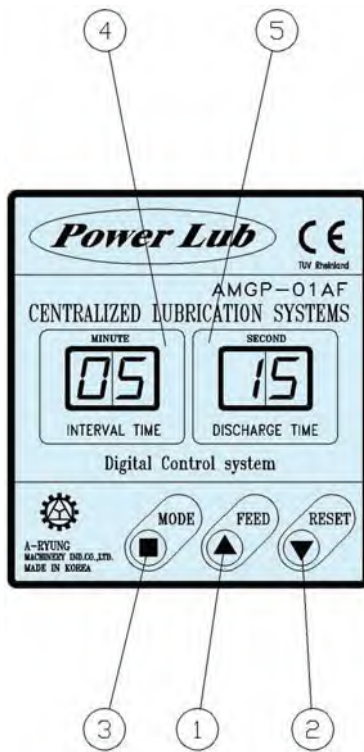


Electric connection 接线图

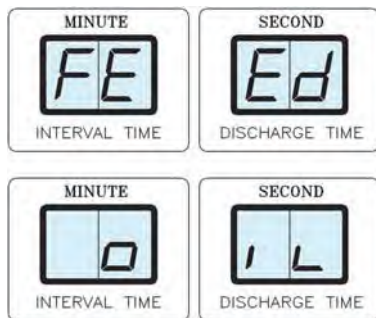




Panel description



- ①: Feed button
- ②: Reset button
- ③: Mode button
- ④: Interval FND
- ⑤: Discharge FND



Interval time 最低设定条件

Discharge Time (吐出时间)	Interval Time (间隔时间)
1~10sec 时	约 2min 以上
11~30sec 时	约 3min 以上
31~60sec 时	约 5min 以上
61~99sec 时	约 10min 以上

设定时间方法

- * 调整范围
Interval Time 1~99min
Discharge Time 1~99sec
- * 吐出流量换算
01A(F):100cc/min = 1.67cc/sec
01AF-T03:150cc/min = 2.50cc/sec

1) 设定方法

- MODE ■ : 设定开始, 移动, 审定结束
▲ : 数值上升
▼ : 数值下降
- A) 首先按下③键MODE "■" 按钮, 设定时间间隔的数字就会闪烁, 此时按①键 "▲" 按钮, 数值上升, 按②键 "▼" 按钮, 数值下降。将所需要的间隔时间设定完成后重新再按一次③键MODE "■" 按钮, 突出时间的数字就会闪烁, 此时同样按① "▲" 按钮, 数值上升, 按②键 "▼" 按钮, 数值下降。所需吐出时间设置完成后, 按③键MODE "■" 按钮退出设定程序。
- B) 如果设定中在十秒内没有任何数字的录入, 系统会默认以设定完成, 并自动切换到运行状态。
- C) "▲", "▼" 键每按一次就会增减一个数值, 如果一直按键数值就会一直增减。

2) RESET 作用

如果在运行过程中按 "RESET" 按钮, 将重新回到初始设定的运行状态。

3) FEED button 作用 (点动供油)

如果在运行状态下按 "FEED" 键, 面板上将显示 "FEED" 字样, 并且在按的时间内液体会正常的吐出, 这和设定时间无关。该键在首次排管时, 便于排出管内空气后利用电动进行注油。

4) OIL不足警报 (Option)

如果容器内OIL不足时, 面板上就会显示 "oil" 的字样同时并发出蜂鸣声。这样可以很容易的知道oil的不足情况。

运行时间确定

- 泵在运转时会有高温产生, 所以需要参照左表设定间隔时间。如果间隔时间对比吐出时间过短, 电机产生的过高温度会被内部的安全装置感知, 因而电机自动停止工作, 然后当温度下降后再重新运转。

Setting instruction of digital timer

- *Setting range
Interval time:1~99 minutes
Discharge time:1~99 seconds
- *Calculation of discharge volume;
01A(F):100cc/min = 1.67cc/sec
01AF-T03:150cc/min = 2.50cc/sec

1) How to set the timer

- Mode ■ : Starting set, Move, Finishing set.
▲ : Numbers up
▼ : Numbers down
- A) If you press the button "■" one time, the interval time mode begins blinking. "▲" button increases the numbers to set the interval time and "▼" decreases the numbers. When it finished, press "■" button again and the discharge volume time mode blinking, "▲" button leads to increase numbers and "▼" to decrease the discharge time. Press again the MODE "■" to exit the setting program.
- B) If you don't press the button within 10 seconds, the timer recognizes the setting time is ended and operates automatically.
- C) When you press "▲", "▼" button every one time, every one number increases(decreases).

2) RESET function

When you push the "RESET" button during the operation, the mode returns to starting set mode.

3) FEED button (manual oiling)

If you press "FEED" button during the operation, the oil discharges regardless the setting mode, also this button can be used to remove the air in pipe or by manual.

4) Alarm of oil shortage(option)

When the oil is short, the window indicates "OIL" with alarm buzzer sound to check easily the oil shortage.

Setting of operation time

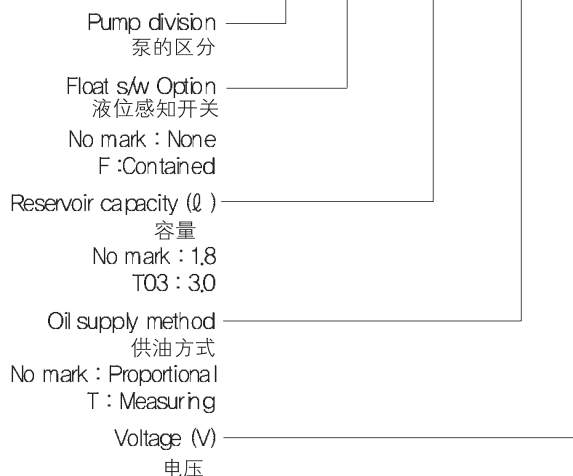
- As this pump occurs the high heat in motor when working, set the interval time following the left information. The motor stops automatically by high motor heat, causing the interval time is shorter than discharge time. But the pump works normally after motor cooling.

Oil Lubrication pumps

AMGP-01M(F) Series



AMGP - 01M F - T03 - T 110



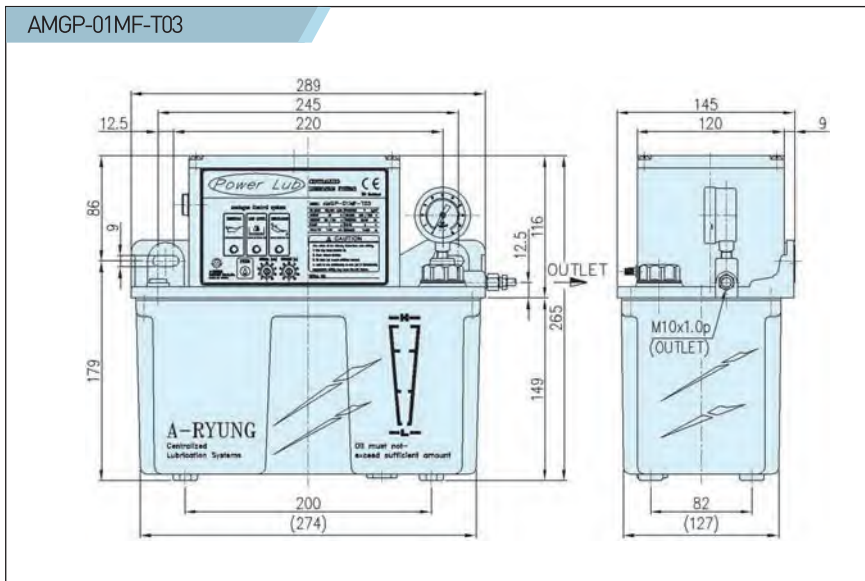
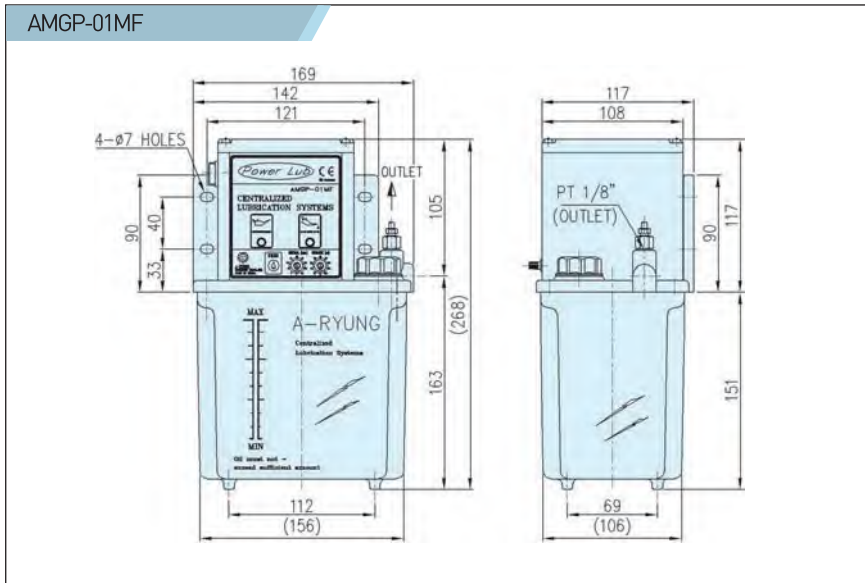
- AMGP-01M自身内设置Analog Timer的控制系统，可以进行间歇式供油，与比例分配阀组合使用。
- Analog Timer方式为左右旋转的控制开关，可以方便的设定休息时间与突出时间，误差范围小，并及时提供所需油量。
- 运转情况在前面的控制面板上以LED标识出来，可以轻松的判断是否有异常。
- 有可以感知液面不足而发出警报的装置，可连接外部控制器使用。
- 泵前面安装有FEED按钮，当首次排管时，可以很容易的排出关内的空气，同时可以利用它进行点动供油。
- 广泛适用于机床设备，印刷设备，食品设备，纺织设备，注塑设备及各种产业设备等等。

- AMGP-01M series pump lubricates intermittently the oil by analog timer installed inside the pump with resistive distributor. (DB type)
- This type is applied analog control system and by turning left and right direction it can easily control the interval and discharge volume.
- Because the LED lamp plate is fitted in front of the pump, it is suitable to check the operation conditions and the trouble.
- This pump has a terminal to contact outside controller to alarm the oil shortage. (Option)
- As the pump is installed feed button switch inside of pump, it is easy to remove the air and to operate by manual.
- This pump is mainly used machine tools, printing, foods, fabrics, injection machine, press and various industrial machine.

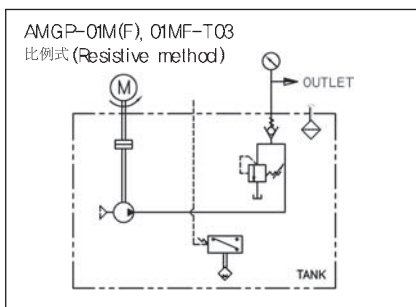
Type	Discharge volume 流量 cc	Interval Time 间隔时间 min	Working Pressure 使用压力 MPa	Reservoir capacity 容器 ℓ	Viscosity 黏度 cSt	Outlet 吐出口 PT	Net weight 重量 kg	Phase 1 Ø, Poles 2P			
								Motor Output 功率 W	Fre- quency 频率 Hz	Rated voltage 电压 V	Current 电流 A
01M 01MF	3~100	1~120	0.8	1.8	30 ~ 500	1/8" (Ø4)	2.8	15	50	100/200	1.4/0.7
									60	110/220	1.2/0.6
01MF-T03	5~150	1~120	0.8	3.0	30 ~ 1000	1/8" (Ø6)	4.7	25	50	100/200	2.0/1.0
									60	110/220	1.8/0.9



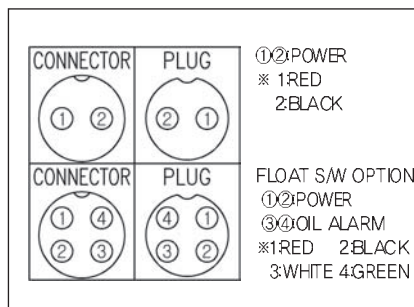
External dimension 外形图



Circuit diagram 回路图



Electric connection 接线图



Applications 适用

- 使用液体: Oils
- 推荐用油: 冬令时→ 32cSt 以下
夏令时→ 68cSt 以下
- 材料
电器控制及控制箱盖: Plastic
油箱: Plastic
齿轮泵: Steel
轴 向: Plastic/ZnDC
- 使用温度: 80°C 以下
- 供油方式: 比例式
- 控制方式: Analog type
- 停止时间: 1~120min
- 吐出时间: MF-T1.8: 3~100cc
MF-T03: 5~150cc
- 压力表 : FG-35K (AMGP-01MF-T03)
- 液体传感器: FS-A 选择式样
- 保险丝 : 0.3A

- Type of fluid : Oils
- Recommended oil
Winter → below 32cSt
Summer → below 68cSt
- Material
Case & Cover : Plastic (ABS)
Tank : Plastic (ABS)
Gear pump : Steel
Shaft guide : Plastic/ALDC
- Temperature : below 80°C
- Oil Supply method : Proportional
- Controller method : Analog type
- Interval time : 1~120min
- Discharge time : MF-T1.8 : 3~100cc
MF-T03 : 5~150cc
- Pressure Gauge : PG-35K
(AMGP-01MF-T03)
- Float switch : FS-A(OPTION)
- Fuse : 0.3A

Interval time 最低设定条件

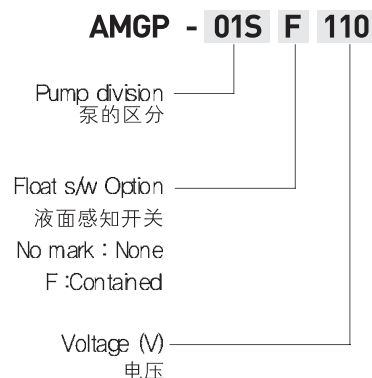
Discharge Time (吐出时间)	Interval Time (间隔时间)
1~10sec 时	约 2min 以上
11~30sec 时	约 3min 以上
31~60sec 时	约 5min 以上
61~99sec 时	约 10min 以上

■ 泵在运转时会有高温产生，所以需要参照左表设定间隔时间。如果间隔时间对比吐出时间过短，电机产生的过高温会被内部的安全装置感知，因而电机自动停止工作，然后当温度下降后再重新运转。

■ As this pump occurs the high heat in motor when working, set the interval time following the information. The motor stops automatically by high motor heat, causing the interval time is shorter than discharge time. But the pump works normally after motor cooling.

Oil Lubrication pumps

AMGP-01S(F) Series

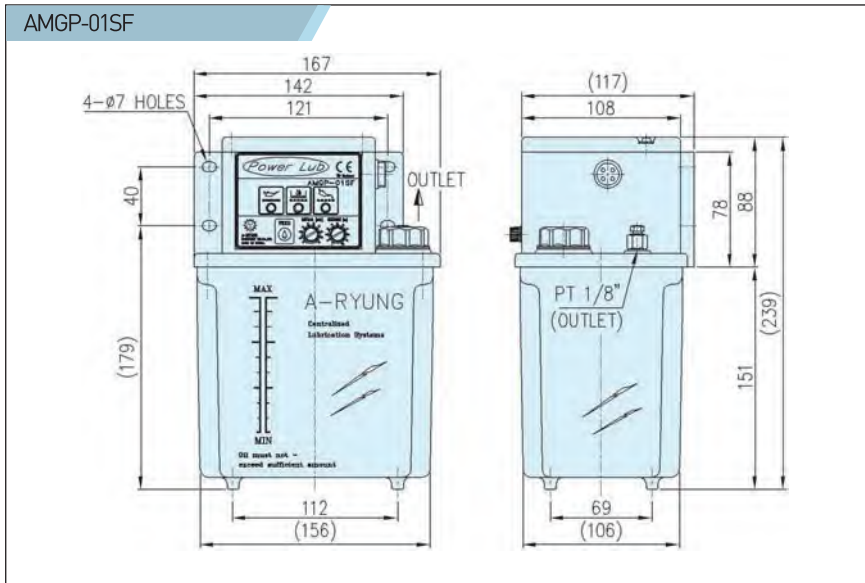


- AMGP-01M自身内设置Analog Timer的控制系统，可以进行间歇式供油，与比例式分配阀组合使用。
- Analog Timer方式为左右旋转的控制开关，可以方便的设定休息时间与突出时间，误差范围小，并可以及时提供所需油量。
- 运转情况在前面的控制面板上以LED标识出来，可以轻松的判断是否有异常。
- 有可以感知液面不足而发出警报的装置，可连接外部控制器使用。
- 泵前面安装有FEED按钮，当首次排管时，可以很容易的排出关内的空气，同时可以利用它进行点动供油。
- 广泛适用于机床设备，印刷设备，食品设备，纺织设备，注塑设备及各种产业设备等等。
- AMGP-01S series pump lubricates intermittently the oil by analog timer installed inside the pump with resistive distributor. (DB type)
- This type is applied analog control system and by turning left and right directions, it can easily control the interval and discharge volume.
- Because the LED lamp plate is fitted in front of the pump, it is suitable to check the operation conditions and the trouble.
- This pump has a terminal to contact outside controller to alarm the oil shortage(option)
- As the pump is installed feed button switch inside of pump, it is easy to remove the air and to operate by manual.
- This pump is mainly used machine tools, printing, foods, fabrics, injection machine, press and various industrial machine.

Type	Discharge volume 流量 cc	Interval Time 间隔时间 min	Working Pressure 使用压力 MPa	Reservoir capacity 容量 ℓ	Viscosity 使用黏度 cSt	Outlet 吐出口 PT	Net weight 重量 kg	Phase 1 Ø, Poles 2P			
								Motor Output 功率 W	Fre- quency 频率 Hz	Rated voltage 电压 V	Current 电流 A
01S 01SF	3~85	2~100	0.8	1.8	30 ~ 500	1/8" (Ø4)	2.8	15	50	100/200	1.4/0.7
									60	110/220	1.2/0.6



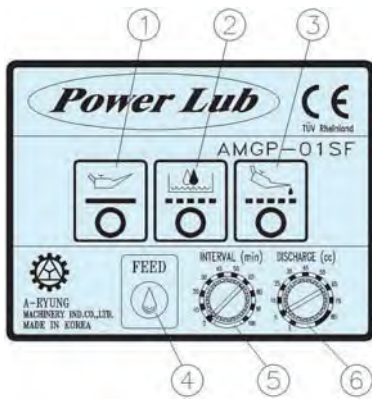
External dimension 外形图



Applications 适用

- 使用液体: Oils
 - 推荐用油: 冬令时→ 32cSt 以下
夏令时→ 68cSt 以下
 - 材质
电器控制箱及控制箱盖: Plastic
油箱: Plastic
齿轮泵: Steel
轴 向: Plastic
 - 使用温度: 80℃ 以下
 - 使用方式: 比例式
 - 控制方式: Analog type
 - 液位传感器 FS-A(选择方式)
 - 保险丝: 0.3A
- Type of fluid : Oils
 - Recommended oil
Winter → below 32cSt
Summer → below 68cSt
 - Material
Case & Cover : Plastic (ABS)
Tank : Plastic (ABS)
Gear pump : Steel
Shaft guide : Plastic
 - Temperature : below 80℃
 - Oil Supply method : Proportional
 - Controller method : Analog type
 - Float switch : FS-A(OPTION)
 - Fuse : 0.3A

Controller Panel

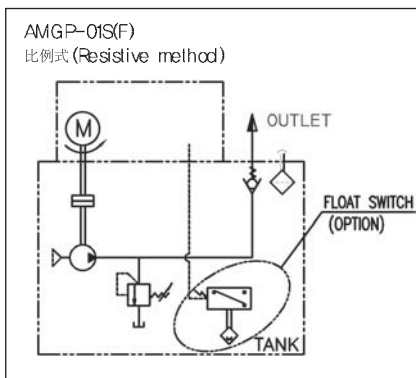


- ① Interval Time LED
- ② Oil Level down alarm
- ③ Discharge Time LED
- ④ FEED Button
(Oil Manual Supply)
- ⑤ Interval time Volume
- ⑥ Discharge time Volume

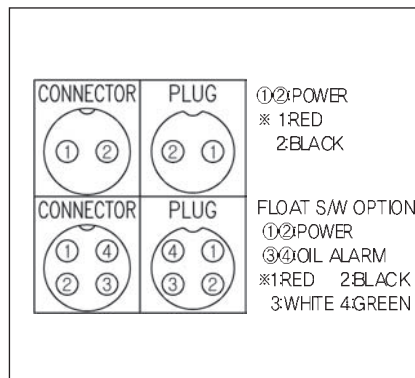
Interval time 最低设定条件

Discharge Time (吐出时间)	Interval Time (间隔时间)
1~10sec 时	约 2min 以上
11~30sec 时	约 3min 以上
31~60sec 时	约 5min 以上
61~99sec 时	约 10min 以上

Circuit diagram 回路图



Electric connection 接线图



泵在运转时会有高温产生，所以需要参照左表设定间隔时间。如果间隔时间对比吐出时间过短，电机产生的过高温度会被内部的安全装置感知，因而电机自动停止工作，然后当温度下降后再重新运转。

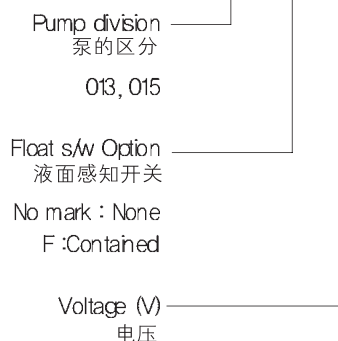
As this pump occurs the high heat in motor when working, set the interval time following the information. The motor stops automatically by high motor heat, causing the interval time is shorter than discharge time. But the pump works normally after motor cooling.

Oil Lubrication pumps

AMGP-013(F) / 015(F) Series



AMGP - 013 F 110



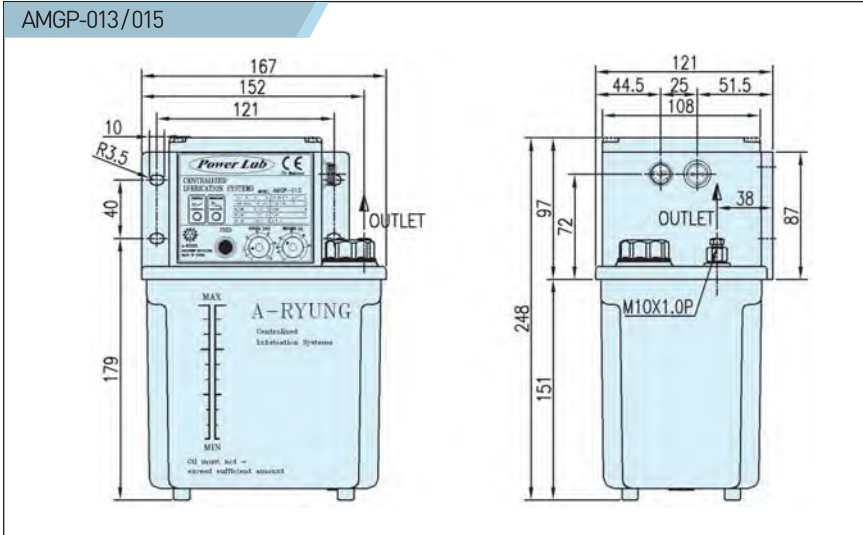
- AMGP-013 (F) /015(F)自身内设置Analog Timer的控制系统，可以进行间歇式供油，与比例式分配阀组合使用。
- 即使是振动很严重的机器也可以使用，因为设置的是防震构造，具有很好的耐久性。
- 有可以感知液面不足而发出警报的装置，可连接外部控制器使用。
- 泵前面安装有FEED按钮，当首次排管时，可以很容易的排出关内的空气，同时可以利用它进行点动供油。
- 广泛适用于机床设备，印刷设备，食品设备，纺织设备，注塑设备及各种产业设备等等。
- AMGP-013, 015 Series pump lubricates intermittently the oil by analog timer installed inside the pump with resistive distributor(DB type).
- This type is high endurance because it is made anti-vibration structure to protect shock and vibration.
- This pump has alarm device when the oil is short and has terminal box connecting with control device outside.(Option)
- As the pump is installed feed button switch front side of pump, it is easy to remove the air and to operate by manual after setting the pump.
- This pump is mainly used machine tools, printing, foods, fabrics, injection machine, press and various industrial machine.

Type	Discharge volume 流量 cc	Interval Time 间隔时间 min	Working Pressure 使用压力 MPa	Reservoir capacity 容量 ℓ	Viscosity 使用黏度 cSt	Outlet 吐出口 PT	Net weight 重量 kg	Phase 1 Ø, Poles 2P			
								Motor Output 功率 W	Fre- quency 频率 Hz	Rated voltage 电压 V	Current 电流 A
013 013F	5~100	3~30	0.8	1.8	30~500	1/8" (Ø4)	2.8	15	50	100/200	1.4/0.7
									60	110/220	1.2/0.6
015 015F	5~80	30~120	0.8	1.8	30~500	1/8" (Ø4)	2.8	15	50	100/200	1.4/0.7
									60	110/220	1.2/0.6



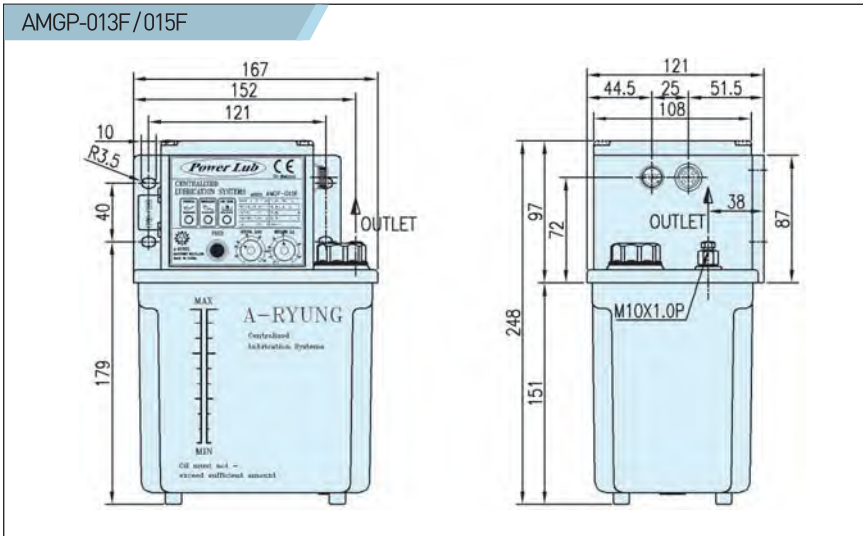
External dimension 外形图

Applications 适用



- 使用液体: Oils
- 推荐用油: 冬令时→ 32cSt 이하
夏令时→ 68cSt 이하
- 材质
控制箱: Plastic
盖: Aluminum
油箱: Plastic
泵头: Steel
导向套: Plastic
- 使用温度: 80℃ 以下
- 使用方式: 比例式
- 控制方式: Analog type
- 液位传感器: FS-A(选择方式)
- 保险丝: 3A

- Type of fluid: Oils
- Recommended oil
Winter → below 32cSt
Summer → below 68cSt



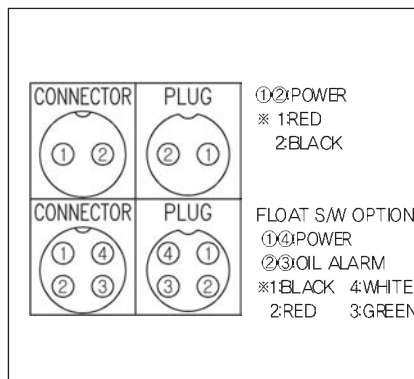
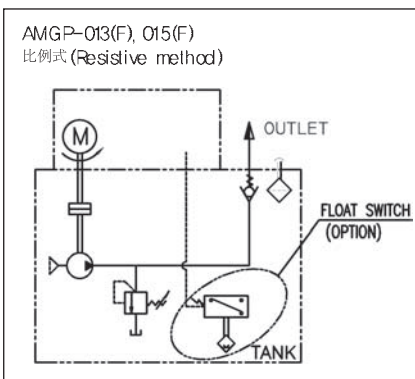
- Material
Case: Plastic (ABS)
Cover: Aluminum (ALDC)
Tank: Plastic (ABS)
Gear pump: Steel
Shaft guide: Plastic
- Temperature: below 80℃
- Oil Supply method: Proportional
- Controller method: Analog type
- Float switch: FS-A(OPTION)
- Fuse: 3A

Interval time 最低设定条件

Discharge Time (吐出时间)	Interval Time (间隔时间)
1~10sec 时	约 2min 以上
11~30sec 时	约 3min 以上
31~60sec 时	约 5min 以上
61~99sec 时	约 10min 以上

Circuit diagram 回路图

Electric connection 接线图



泵在运转时会有高温产生，所以需要参照左表设定间隔时间。如果间隔时间对比吐出时间过短，电机产生的过高温度会被内部的安全装置感知，因而电机自动停止工作，然后当温度下降后再重新运转。

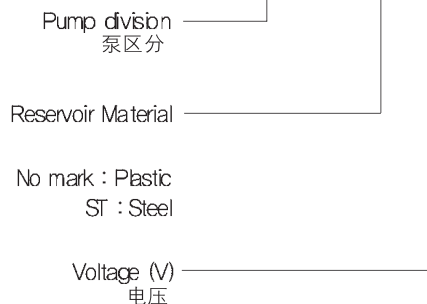
As this pump occurs the high heat in motor when working, set the interval time following the information. The motor stops automatically by high motor heat, causing the interval time is shorter than discharge time. But the pump works normally after motor cooling.

Oil Lubrication pumps

AMGP-025N Series



AMGP - 025N - ST 110



■ AMGP-013 (F) /015(F)自身内设置Analog Timer的控制系统，可以进行间歇式供油，与比例式分配阀组合使用。

■ 即使是振动很严重的机器也可以使用，因为设置的是防震构造，具有很好的耐久性。

■ 有可以感知液面不足而发出警报的装置，可连接外部控制器使用。

■ 泵前面安装有FEED按钮，当首次排管时，可以很容易的排出关内的空气，同时可以利用它进行点动供油。

■ 广泛适用于机床设备，印刷设备，食品设备，纺织设备，注塑设备及各种产业设备等等。

■ AMGP-025N Series pump lubricates intermittently the oil by analog timer installed inside the pump with resistive distributor(DB type).

■ This type is excellent endurance designed anti-vibration structure to use much shock or vibration.

■ This pump has alarm device when the oil is short and has terminal box connecting with control device outside.

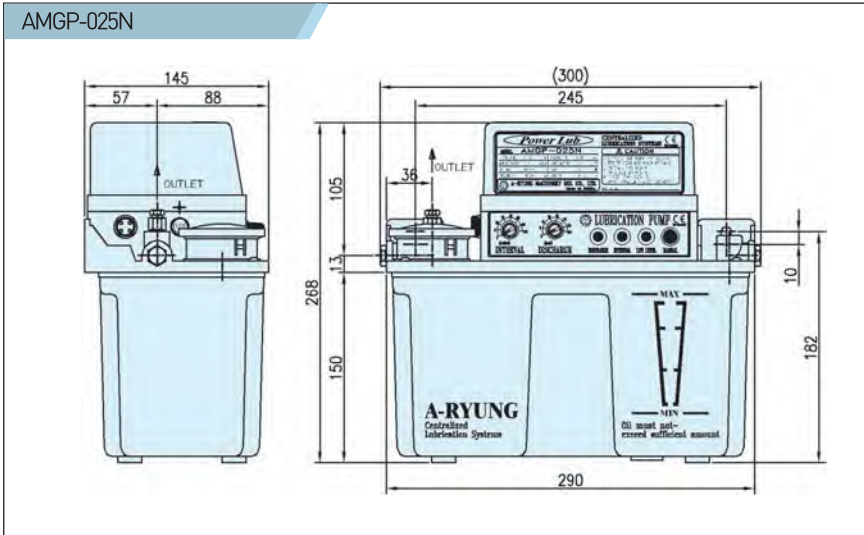
■ As the pump is installed feed button switch inside of pump, it is easy to remove the air and to operate by manual.

■ This pump is mainly used machine tools, printing, foods, fabrics, injection machine, press and various industrial machine.

Type	Discharge volume 流量 cc	Interval Time 间隔时间 min	Working Pressure 使用压力 MPa	Reservoir capacity 容量 ℓ	Viscosity 使用黏度 cSt	Outlet 吐出口 PT	Net weight 重量 kg	Phase 1 Ø, Poles 2P			
								Motor Output 功率 W	Fre- quency 频率 Hz	Rated voltage 电压 V	Current 电流 A
025N 025N-ST	3~60	3~120	0.8	4.0	30 ~ 500	1/8" (Ø4)	2.8	15	50	100/200	1.4/0.7
									60	110/220	1.2/0.6



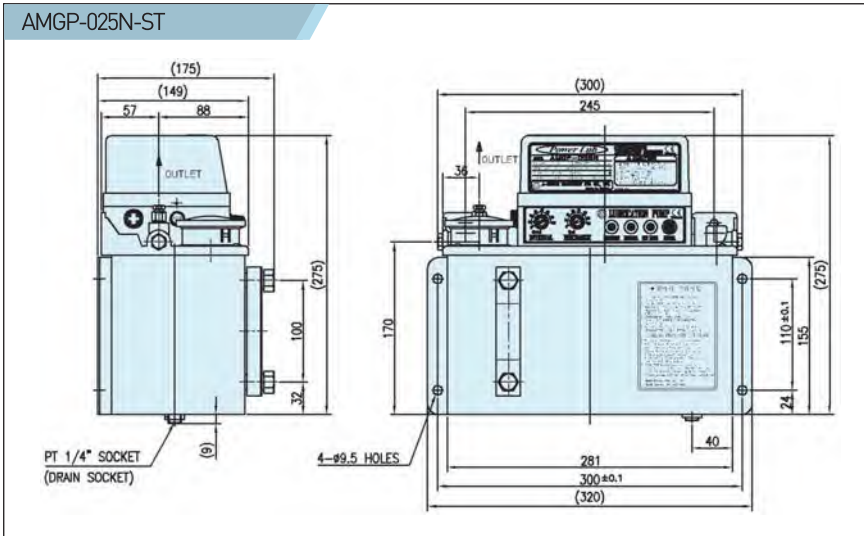
External dimension 外形图



Applications 适用

- 使用液体: Oils
- 推荐用油: 冬令时→ 32cSt 以下
夏令时→ 68cSt 以下
- 材质
盖: Aluminum
油箱: Plastic
盖和油箱: Plastic / Steel
泵头: Steel
导向套: Plastic
- 使用温度: 80℃ 以下
- 供油方式: 比例式
- 控制方式: Analog type
- 液位传感器: FS-A
- 保险丝: 3A

- Type of fluid: Oils
- Recommended oil
Winter → below 32cSt
Summer → below 68cSt

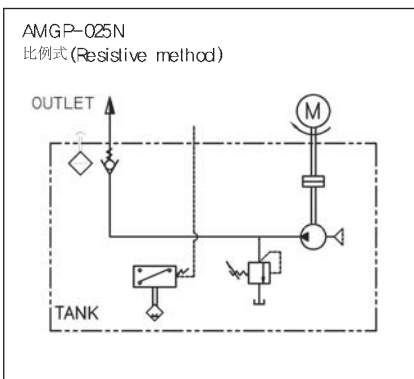


- Material
Case: Aluminum (ALDC)
Cover: Plastic (ABS)
Tank: Plastic (ABS) / Steel
Gear pump: Steel
Shaft guide: Plastic
- Temperature: below 80℃
- Oil Supply method: Proportional
- Controller method: Analog type
- Float switch: FS-A
- Fuse: 3A

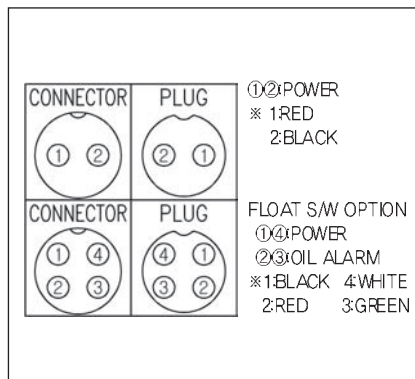
Interval time 最低设定条件

Discharge Time (吐出时间)	Interval Time (间隔时间)
1~10sec 时	约 2min 以上
11~30sec 时	约 3min 以上
31~60sec 时	约 5min 以上
61~99sec 时	约 10min 以上

Circuit diagram 回路图



Electric connection 接线图



泵在运转时会有高温产生，所以需要参照左表设定间隔时间。如果间隔时间对比吐出时间过短，电机产生的过高温会被内部的安全装置感知，因而电机自动停止工作，然后当温度下降后再重新运转。

As this pump occurs the high heat in motor when working, set the interval time following the information. The motor stops automatically by high motor heat, causing the interval time is shorter than discharge time. But the pump works normally after motor cooling.

Oil Lubrication pumps

AMGP-**NS Series



AMGP - 01NS - T03 110

Pump division
泵区分

01NS
015NS
025NS

Reservoir capacity (ℓ)
容量

No mark : 1.8
T03 : 3.0

Voltage (V)
电压

- 此系列润滑油泵为间接式供油定量式泵，与Measuring valve (ARD-340, 350.PVOtype) 组合使用。
- 设有油位不足时可以感知的液位传感器及压力开关，且可以与外部控制器连接进行使用。
- 泵前面安装有FEED键，当首次排管时，可以很容易的排出管内的空气，同事可以利用它进行电动供油。
- 此泵为间接式泵，不可连续运转使用。
- 广泛适用于机床设备，印刷设备，食品设备，注塑设备，冲床及各种产业设备等。

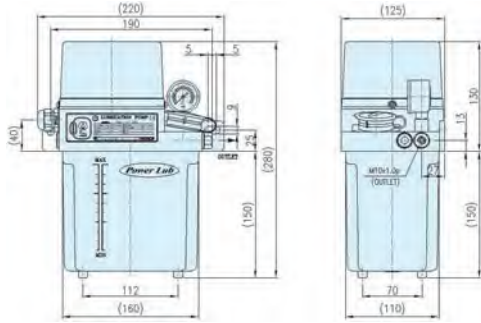
- AMGP-01NS/025NS pump is a resistive and intermittent pump, using with measuring valve. (ARD-340,350 and PVO type)
- This pump have float switch and pressure switch inside to check the oil shortage and connect the outside terminal on main machine to control the working conditions by monitoring.
- As the pump is installed feed button switch inside of pump, it is easy to remove the air and to operate by manual.
- This type is a kind of intermittent pump, so that the continuous operation should be prohibited.
- This pump is mainly used machine tools, printing, foods, injection machine, press and various industrial machine.

Type	Discharge volume 流量 cc/min	Working pressure 使用压力 MPa	Pressure range 压力范围 MPa	Reservoir capacity 容量 ℓ	Viscosity 使用黏度 cSt	Outlet 吐出口 PT	Net weight 重量 kg	Phase 1 Ø, Poles 2P			
								Motor Output 功率 W	Fre- quency 频率 Hz	Rated voltage 电压 V	Current 电流 A
01NS 015NS	125	1.7	0.2~1.7	1.8	30~500	1/4" (Ø6)	3.0	25	50	100/200	1.7/0.8
	150								60	110/220	1.8/0.9
01NS-T03	125	1.7	0.2~1.7	3.0	30~1000	1/8" (Ø6)	4.0	25	50	100/200	1.7/0.8
	150								60	110/220	1.8/0.9
025NS	125	1.7	0.2~1.7	3.0	30~1000	1/8" (Ø6)	4.0	25	50	100/200	1.7/0.8
	150								60	110/220	1.8/0.9

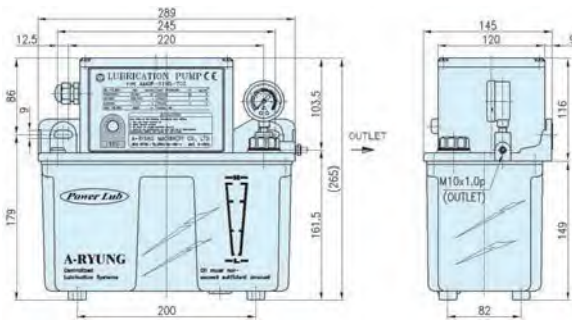


External dimension 外形图

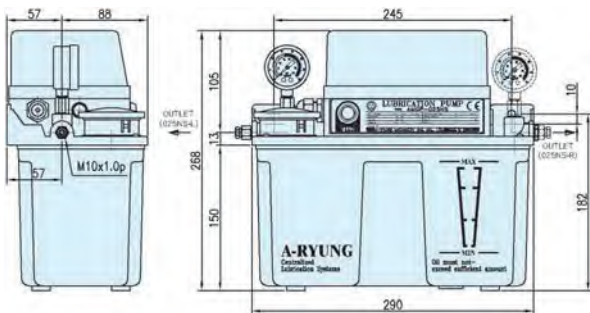
AMGP-01NS/015NS



AMGP-01NS-T03

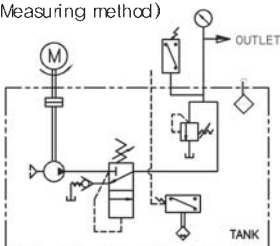


AMGP-025NS

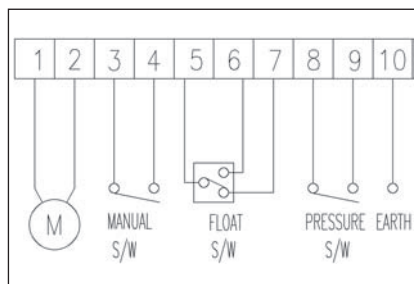


Circuit diagram 回路图

定量式 (Measuring method)



Electric connection 接线图



Applications 适用

- 使用液体: Oils
- 推荐用油: 冬令时 → 32cSt 以下
夏令时 → 68cSt 以下
- 材质
控制箱: 铝 (ALDC)
盖: 塑料
油箱: 塑料
齿轮泵: Steel
导向套: 铝 (ALDC) 内置调压阀
- 使用温度: 80°C 以下
- 供油方式: 定量式
- 控制方式: 没有 (Monitoring)
- 液位传感器: FS-AB
- 压力开关: PS-11
- 压力表: FG-35K

- Type of fluid: Oils
- Recommended oil
Winter → below 32cSt
Summer → below 68cSt
- Material
Case: Aluminum (ALDC)
Cover: Plastic (ABS)
Reservoir: Plastic (ABS)
Gear Pump: Steel
Shaft guide: Aluminum (ALDC)
Built in Relief valve
- Temperature: below 80°C
- Oil supply method: Measuring
- Controller method: Monitoring
- Float switch: FS-AB
- Pressure switch: PS-11
- Pressure Gauge: PG-35K

Interval time 最低设定条件

Discharge Time (吐出时间)	Interval Time (间隔时间)
1~10sec 时	约 2min 以上
11~30sec 时	约 3min 以上
31~60sec 时	约 5min 以上
61~99sec 时	约 10min 以上

■ 泵在运转时会有高温产生，所以需要参照上表设定间隔时间。如果间隔时间对比吐出时间过短，电机产生的过高温度会被内部的安全装置感知，因而电机自动停止工作，然后当温度下降后再重新运转。

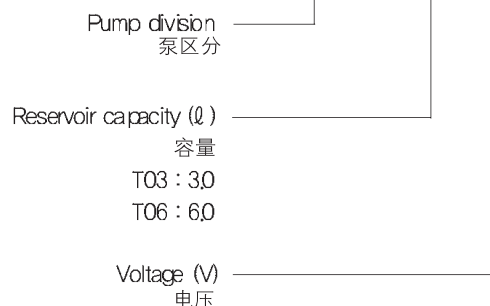
■ As this pump occurs the high heat in motor when working, set the interval time following the information. The motor stops automatically by high motor heat, causing the interval time is shorter than discharge time. But the pump works normally after motor cooling.

Oil Lubrication pumps

AMGP-200NS Series



AMGP - 200NS - T03 110



- 此系列润滑油泵为间接式供油定量式泵，与Measuring valve (ARD-340, 350.PVOtype) 组合使用。
- 设有油位不足时可以感知的液位传感器及压力开关，且可以与外部控制器连接进行使用。
- 泵前面安装有FEED键，当首次排管时，可以很容易的排出管内的空气，同事可以利用它进行电动供油。
- 此泵为间接式泵，不可连续运转使用。
- 广泛适用于机床设备，印刷设备，食品设备，注塑设备，冲床及各种产业设备等。

- AMGP-200NS pump is a resistive and intermittent pump, using with measuring valve(ARD-340,350 and PVO type).
- This pump have float switch and pressure switch inside to check the oil shortage and connect the outside terminal on main machine to control the working conditions by monitoring.
- As the pump is installed feed button switch inside of pump, it is easy to remove the air and to operate by manual.
- This type is an intermittent pump, so the continuous operation should be prohibited.
- This pump is mainly used machine tools, printing, foods, injection machine, press and various industrial machine.

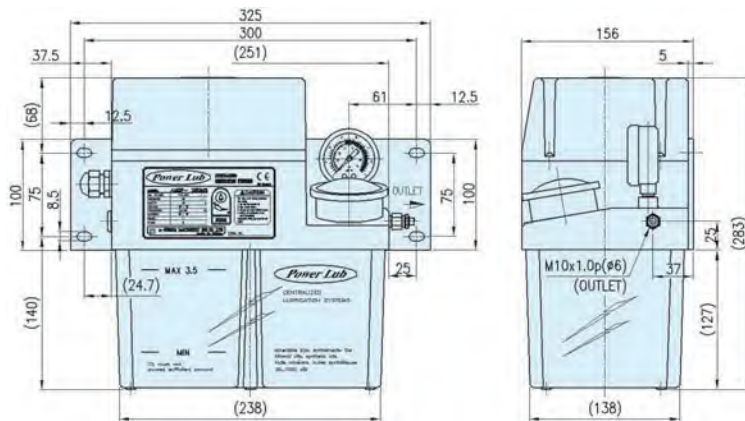
Type	Discharge volume 流量 cc/min	Working pressure 使用压力 MPa	Pressure range 压力范围 MPa	Reservoir capacity 容量 ℓ	Viscosity 使用黏度 cSt	Outlet 吐出口 PT	Net weight 重量 kg	Phase 1 Ø, Poles 2P			
								Motor Output 功率 W	Fre- quency 频率 Hz	Rated voltage 电压 V	Current 电流 A
200NS-T03	200	2.0	0.8~2.5	3.0	30~1000	1/4"(Ø6)	5.4	42	50	100/200	4.8/2.1
	240								60	110/220	5.0/1.8
200NS-T06	200	2.0	0.8~2.5	6.0	30~1000	1/4"(Ø6)	5.8	42	50	100/200	4.8/2.1
	240								60	110/220	5.0/1.8



External dimension 外形图

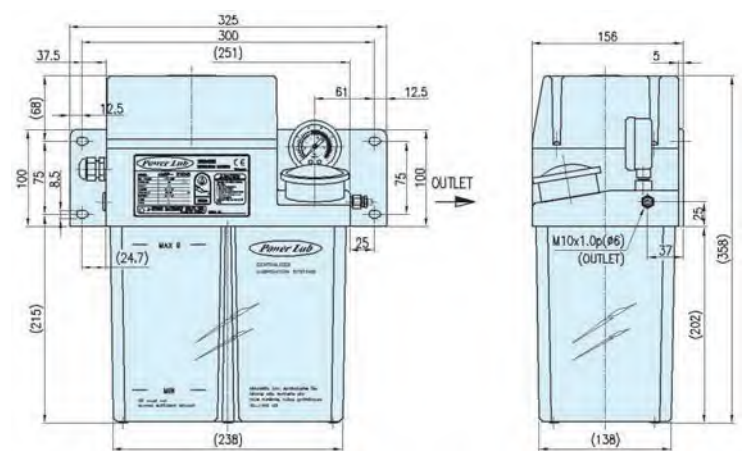
Applications 适用

AMGP-200NS-T03



- 使用液体: Oils
- 推荐用油: 冬令时→ 32cSt 以下
夏令时→ 68cSt 以下
- 材质
控制箱: 铝 (ALDC)
盖: 塑料
油箱: 塑料
齿轮泵: Steel
导向套: 铝 (ALDC) 内置调压阀
- 使用温度: 80°C 以下
- 供油方式: 定量式
- 控制方式: 没有 (Monitoring)
- 液位传感器: FS-AB
- 压力开关: PS-11
- 压力表: PG-35K

AMGP-200NS-T06



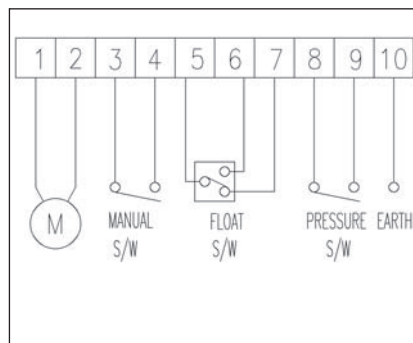
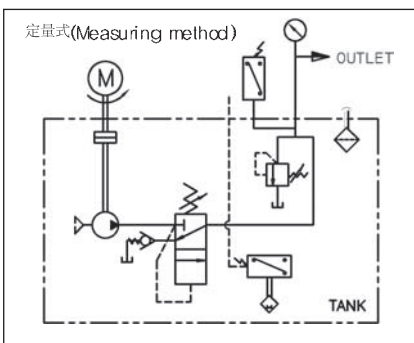
- Type of fluid : Oils
- Recommended oil
Winter → bebw 32cSt
Summer → below 68cSt
- Material
Case : Aluminum (ALDC)
Cover : Plastic (ABS)
Reservoir : Plastic (ABS)
Gear Pump : Steel
Shaft guide : Aluminum (ALDC)
Built in Relief valve
- Temperature : below 80°C
- Oil supply method : Measuring
- Controller method : Monitoring
- Float switch : FS-AB
- Pressure switch : PS-11
- Pressure Gauge : PG-35K

Interval time 最低设定条件

Discharge Time (吐出时间)	Interval Time (间隔时间)
1~10sec 时	约 2min 以上
11~30sec 时	约 3min 以上
31~60sec 时	约 5min 以上
61~99sec 时	约 10min 以上

Circuit diagram 回路图

Electric connection 接线图

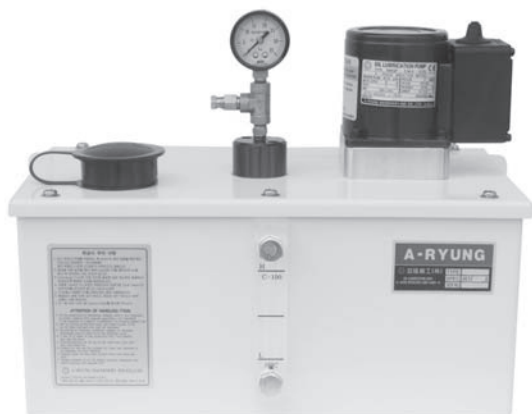


泵在运转时会有高温产生，所以需要参照左表设定间隔时间。如果间隔时间对比吐出时间过短，电机产生的过高温会被内部的安全装置感知，因而电机自动停止工作，然后当温度下降后再重新运转。

As this pump occurs the high heat in motor when working, set the interval time following the information. The motor stops automatically by high motor heat, causing the interval time is shorter than discharge time. But the pump works normally after motor cooling.

Oil Lubrication pumps

AMGP-01N/02N Series



AMGP - 3M2 - 01N - T03 - TY S

Voltage division 电源	}
3M2 : 3 ϕ , 220V, 50/60Hz	
3M3 : 3 ϕ , 380V, 50/60Hz	
3M4 : 3 ϕ , 440V, 50/60Hz	}
Pump division 泵的区分	
01N, 02N	}
Reservoir capacity 容量(l)	
T03 : 3, T06 : 6 T12 : 12, T20 : 20	
Reservoir type 附着方式	}
TY : Wall mounting 附道墙面	
TZ : Bottom mounting 附着地面	}
Pressure switch (Option) 压力开关	

■ AMGP-01N/02N型润滑油泵是为满足各种机器要求而制作具有高精度, 高流量的特点。用途不同, 可以按比例式使用或与 Measuring valve (ARD-340, 350.PVOtype) 组合使用。(按定量式使用时需要安装泄压阀)。

■ 内部安装的调节压力阀可以调节压力。该润滑系统易与油箱装配。

■ 此泵为间接式泵, 不可连续运转使用。

■ 广泛适用于机床设备, 印刷设备, 食品设备, 注塑设备, 冲床及各种产业设备等。

■ AMGP-01N and 02N type are designed specially to lubricate a high precision and high discharge volume at every location on the machine. It can be used resistive method or measuring method with measuring valve(ARD-340,350,PVO type).

(When you use it measuring type, the venting valve have to be attached.)

■ The pressure can be controlled because the relief valve is attached, and it is easy to assemble the lubrication unit with tank.

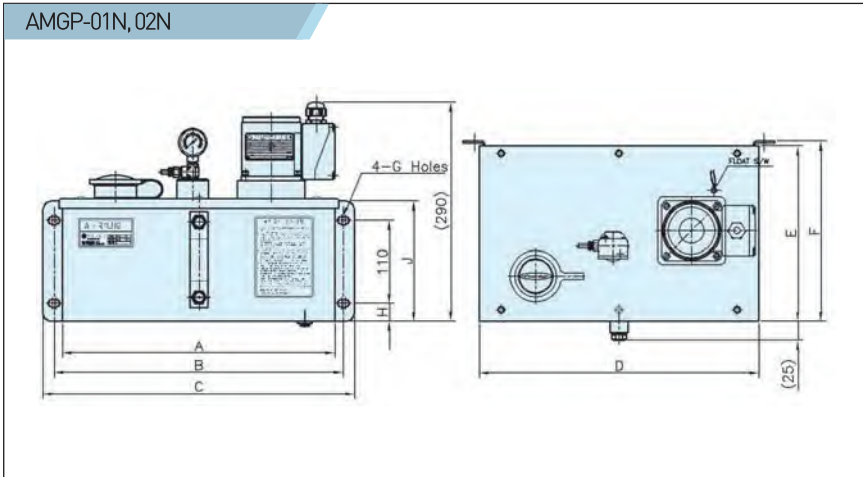
■ As this type is an intermittent pump, the continuous operation should be prohibited.

■ This pump is mainly used machine tools, printing, foods, injection machine, press and various industrial machine.

Type	Discharge volume 流量 cc/min	Working pressure 使用压力 MPa	Pressure range 压力范围 MPa	Viscosity 使用黏度 cSt	Outlet 吐出口 PT	Motor Output 功率 W	Phase 相数 / Poles 级数	Fre- quency 频率 Hz	Rated voltage 电压 V	Current 电流 A
01N	85	2.0	0.8 ~ 2.0	30 ~ 500	1/8" (ϕ 6)	25	3 ϕ / 4P	50	200	0.27
	100								380	0.17
02N	170	2.0	0.8 ~ 2.0	30 ~ 1000	1/8" (ϕ 6)			50	415	0.13
									220	0.24
	200					60	380	0.14		
							440	0.12		



External dimension 外形图



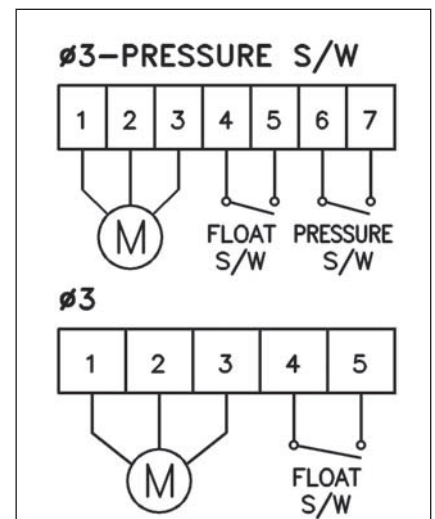
Applications 适用

- 使用液体: Oils
- 推荐用油: 冬令时→32cSt 以下
夏令时→68cSt 以下
- 材质
电机 : 铝 (ALDC)
齿轮泵 : Steel
油箱 : Steel
盖板 : Steel
液面计 : Plastic (PC)
调节压力阀: 铝 (ALDC)
- 使用温度 : 80°C 以下
- 供油方式 : 定量式/比例式
- 控制方式 : 无 (Monitoring)
- 液位传感器: FS-A
- 压力开关 : 选择使用
- 压力表 : PG-35K

- Type of fluid : Oils
- Recommended oil
Winter → below 32cSt
Summer → below 68cSt
- Material
Motor flame : Aluminum(ALDC)
Gear pump : Steel
Reservoir : Steel
Plate : Steel
Level gauge : Plastic(PC)
Relief valve : Aluminum(ALDC)
- Temperature : below 80°C
- Oil Supply method :
Measuring method
Proportional method
- Controller method : Monitoring
- Float switch : FS-A
- Pressure switch : Option
- Pressure Gauge : PG-35K

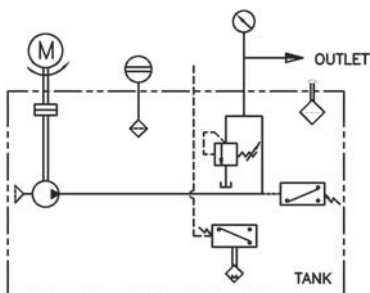
Type	A	B	C	D	E	F	G	H	J	Net weight 重量 Kg
01N-T03	280	300	320	290	135	145	9.5×14.5	24	160	7.4
01N-T06	300	320	346	310	195	210	9.5×14.5	24	160	8.1
01N-T12	363	386	416	373	234	240	11×16	24	160	9.8
01N-T20	470	500	520	484	316	322	12×17	29	160	15.0
02N-T03	280	300	320	290	135	145	9.5×14.5	24	160	7.4
02N-T06	300	320	346	310	195	210	9.5×14.5	24	160	8.1
02N-T12	363	386	416	373	234	240	11×16	24	160	9.8
02N-T20	470	500	520	484	316	322	12×17	29	160	15.0

Electric connection 接线图

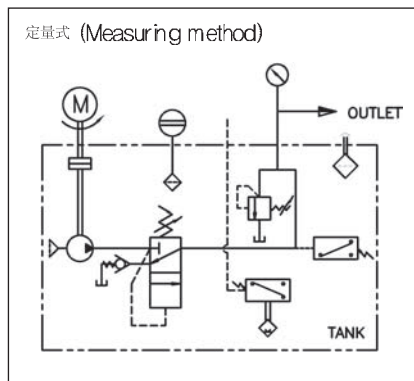


Circuit diagram 回路图

比例式 (Resistive method)



定量式 (Measuring method)



Oil Lubrication pumps

AMGP-03/05 Series



AMGP - 3M2 - 03 - T03 - TY S

Voltage division 电源	3M2 : 3Ø, 220V, 50/60Hz 3M3 : 3Ø, 380V, 50/60Hz 3M4 : 3Ø, 440V, 50/60Hz
Pump division 泵的区分	03, 05
Reservoir capacity 容量(l)	T03 : 3, T06 : 6 T12 : 12, T20 : 20
Reservoir type 附着方式	TY : Wall mounting 挂式安装 TZ : Bottom mounting 平放安装
Pressure switch (Option) 压力开关	

■ AMGP-03/05N型润滑油泵是为满足各种机器要求而制作具有高精度，高流量的特点。用途不同，可以按比例式使用或与Measuring valve (ARD-340, 350.PVOtype) 组合使用。(按定量式使用时需要安装泄压阀)。

■ 内部安装的调节压力阀可以调节压力。该润滑系统易与油箱装配。

■ 此泵为间接式泵，不可连续运转使用。

■ 广泛适用于机床设备，印刷设备，食品设备，注塑设备，冲床及各种产业设备等。

■ AMGP-03 and 05 type are designed specially to lubricate a high precision and high discharge volume at every location on the machine. It can be used resistive method or measuring method with measuring valve (ARD-340, 350, PVO type).

■ When you use it measuring type, the venting valve have to be attached.

■ The pressure can be controlled because the relief valve is attached, and it is easy to assemble the lubrication unit with tank.

■ As this type is an intermittent pump, the continuous operation should be prohibited.

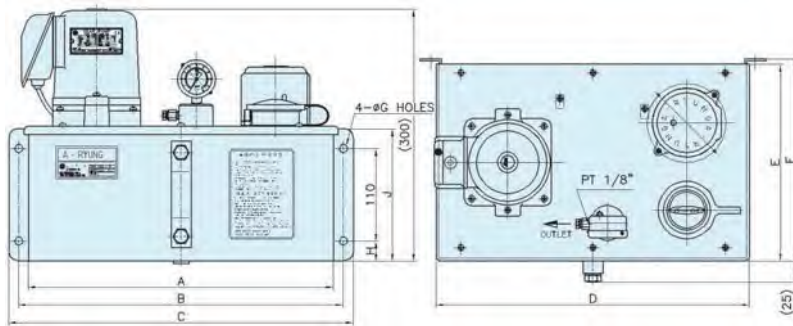
■ This pump is mainly used machine tools, printing, foods, injection machine, press and various industrial machine.

Type	Discharge volume 流量 cc/min	Working pressure 使用压力 MPa	Pressure range 压力范围 MPa	Viscosity 使用黏度 cSt	Outlet 吐出口 PT	Motor Output 功率 W	Phase 相数 / Poles 级数	Fre- quency 频率 Hz	Rated voltage 电压 V	Current 电流 A
03	250	2.0	0.8 ~ 2.5	30 ~ 1000	1/8" (Ø6)	50	3Ø / 4P	50	200	0.54
	380								0.31	
05	420	2.0	0.8 ~ 2.5	30 ~ 1000	1/8" (Ø6)	50	3Ø / 4P	50	415	0.27
	220								0.6	
	300							60	380	0.35
									440	0.30
									200	0.54
									380	0.31
									415	0.27
									220	0.6
									380	0.35
									440	0.30



External dimension 外形图

AMGP-03,05



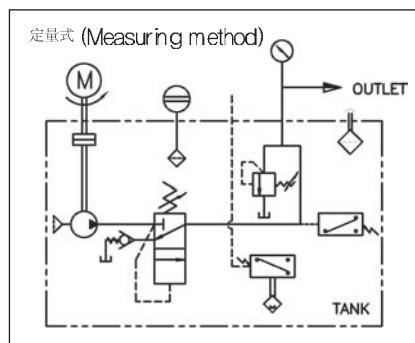
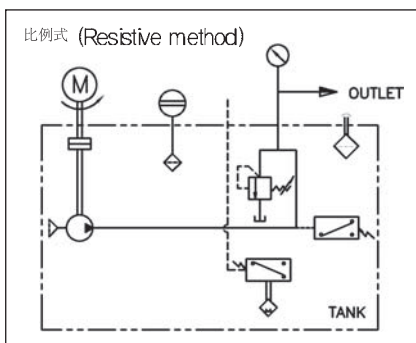
Type	A	B	C	D	E	F	G	H	J	Net weight 重量 Kg
03-T03	280	300	320	290	135	145	9.5X14.5	24	160	9.6
03-T06	300	320	346	310	195	210	9.5X14.5	24	160	11
03-T12	363	386	416	373	234	240	11X16	24	160	13
03-T20	470	500	520	484	316	322	12X17	29	160	17
05-T03	280	300	320	290	135	145	9.5X14.5	24	160	9.6
05-T06	300	320	346	310	195	210	9.5X14.5	24	160	11
05-T12	363	386	416	373	234	240	11X16	24	160	13
05-T20	470	500	520	484	316	322	12X17	29	160	17

Applications 适用

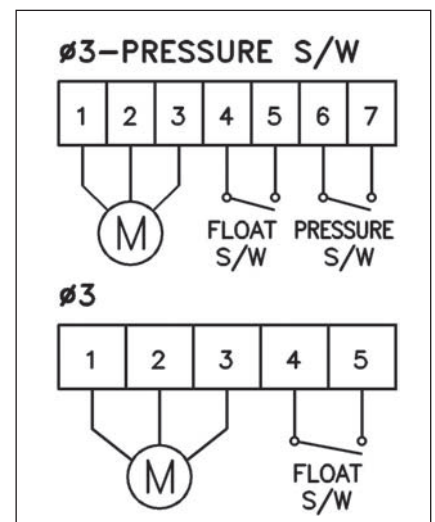
- 使用液体 : Oils
- 推荐用油 : 冬令时 → 32cSt 以下
夏令时 → 68cSt 以下
- 材质
电机 : 铝 (ALDC)
齿轮泵 : Steel
油箱 : Steel
盖板 : Steel
液面计 : Plastic (PC)
调节压力阀 : 铝 (ALDC)
- 使用温度 : 80°C以下
- 供油方式 : 定量式/比例式
- 控制方式 : 无 (Monitoring)
- 液位传感器 : FS-A
- 压力开关 : 选择使用
- 压力表 : FG-35K

- Type of fluid : Oils
- Recommended oil
Winter → below 32cSt
Summer → below 68cSt
- Material
Motor frame : Aluminum(ALDC)
Gear pump : Steel
Reservoir : Steel
Plate : Steel
Level gauge : Plastic(PC)
Relief valve : Aluminum(ALDC)
- Temperature : below 80°C
- Oil Supply method :
Measuring method
Proportional method
- Controller method : Monitoring
- Float switch : FS-A
- Pressure switch : Option
- Pressure Gauge : PG-35K

Circuit diagram 回路图



Electric connection 接线图

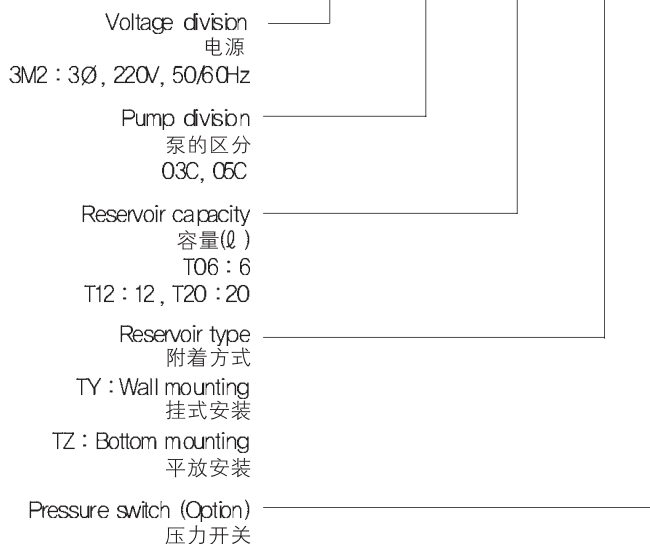


Oil Lubrication pumps

AMGP-03C/05C Series



AMGP - 3M2 - 03C - T03 - TY S



■ AMGP-03/05N型润滑油泵是为满足各种机器要求而制作具有高精度，高流量的特点。用途不同，可以按比例式使用或与Measuring valve (ARD-340, 350,PVOtype) 组合使用。(按定量式使用时需要安装泄压阀)。

■ 内部安装的调节压力阀可以调节压力。该润滑系统易与油箱装配。

■ 此泵为间接式泵，不可连续运转使用。

■ 广泛适用于机床设备，印刷设备，食品设备，注塑设备，冲床及各种产业设备等。

■ AMGP-03 and 05 type are designed specially to lubricate a high precision and high discharge volume at every location on the machine. It can be used resistive method or measuring method with measuring valve (ARD-340,350,PVO type).

■ When you use it measuring type, the venting valve have to be attached.

■ The pressure can be controlled because the relief valve is attached, and it is easy to assemble the lubrication unit with tank.

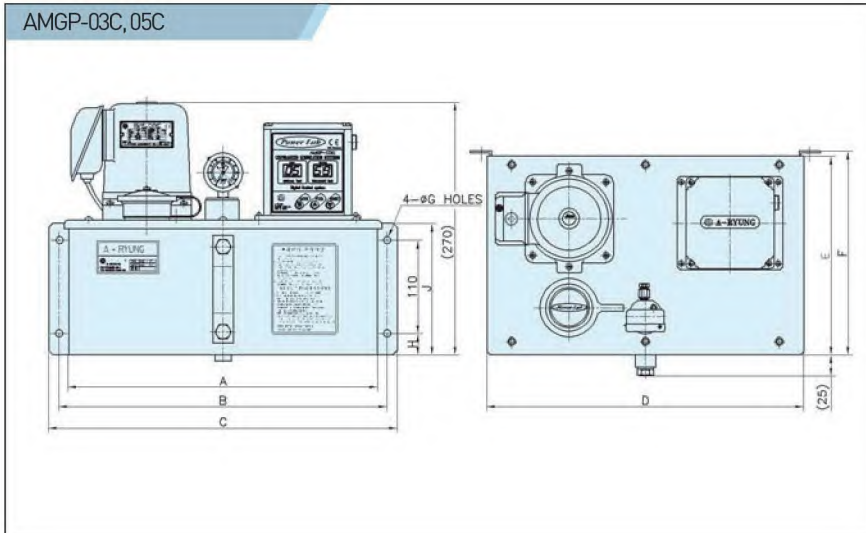
■ As this type is an intermittent pump, the continuous operation should be prohibited.

■ This pump is mainly used machine tools, printing, foods, injection machine, press and various industrial machine.

Type	Discharge volume 流量 cc/min	Working pressure 使用压力 MPa	Pressure range 压力范围 MPa	Viscosity 使用黏度 cSt	Outlet 吐出口 PT	Motor Output 功率 W	Phase 相数 / Poles 级数	Fre- quency 频率 Hz	Rated voltage 电压 V	Current 电流 A
03C	250	2.0	0.8 ~ 2.5	30 ~ 1000	1/8" (Ø6)	50	3Ø / 4P	50	200	0.54
	300							60	220	0.6
05C	420	2.0	0.8 ~ 2.5	30 ~ 1000	1/8" (Ø6)	50	3Ø / 4P	50	200	0.54
	500							60	220	0.6



External dimension 外形图



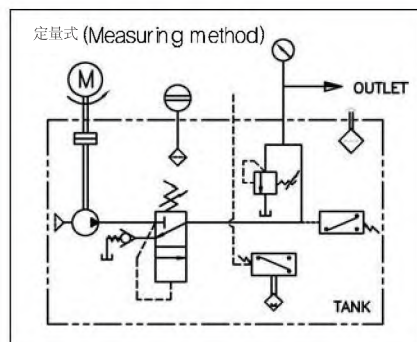
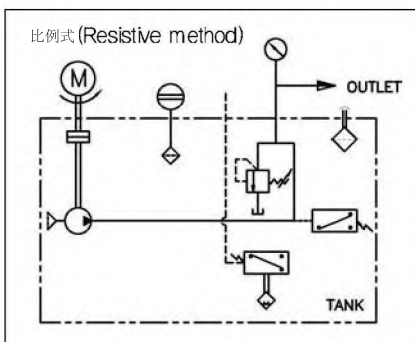
Applications 适用

- 使用液体:Oils
- 推荐用油: 冬令时-32cSt以下
夏令时-68cSt以下
- 材质
电机:铝(ALDC)
齿轮泵:Steel
油箱:Steel
盖板:Steel
液面计:Plastic(PC)
调节压力阀:铝(ALDC)
- 使用温度:80℃以下
- 供油方式:定量式/比例式
- 控制方式:无(Monitoring)
- 液位传感器: FS-A
- 压力开关: 选择使用
- 压力表:PG-35K

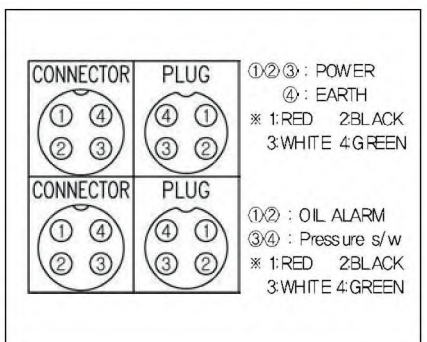
Type	A	B	C	D	E	F	G	H	J	Net weight 重量 Kg
03C-T06	300	320	346	310	195	210	9.5X14.5	24	160	11
03C-T12	363	386	416	373	234	240	11X16	24	160	13
03C-T20	470	500	520	484	316	322	12X17	29	160	17
05C-T06	300	320	346	310	195	210	9.5X14.5	24	160	11
05C-T12	363	386	416	373	234	240	11X16	24	160	13
05C-T20	470	500	520	484	316	322	12X17	29	160	17

- Type of fluid : Oils
- Recommended oil
Winter → below 32cSt
Summer → below 68cSt
- Material
Motor flame : Aluminum(ALDC)
Gear pump : Steel
Reservoir : Steel
Plate : Steel
Level gauge : Plastic(PC)
Relief valve : Aluminum(ALDC)
- Temperature : below 80℃
- Oil Supply method :
Measuring method
Proportional method
- Controller method : Monitoring
- Float switch : FS-A
- Pressure switch : Option
- Pressure Gauge : PG-35K

Circuit diagram 回路图



Electric connection 接线图



Oil Lubrication pumps

AMGP-053 Series



AMGP - 3M2 - 053 - T06

Voltage division
电源
3M2 : 3Φ, 220V, 50/60Hz
3M3 : 3Φ, 380V, 50/60Hz
3M4 : 3Φ, 440V, 50/60Hz

Pump division
泵区分

Reservoir capacity (ℓ)
容量
Plastic(Standard) :
T06 : 6.0ℓ
Steel(Option) : T12, T20

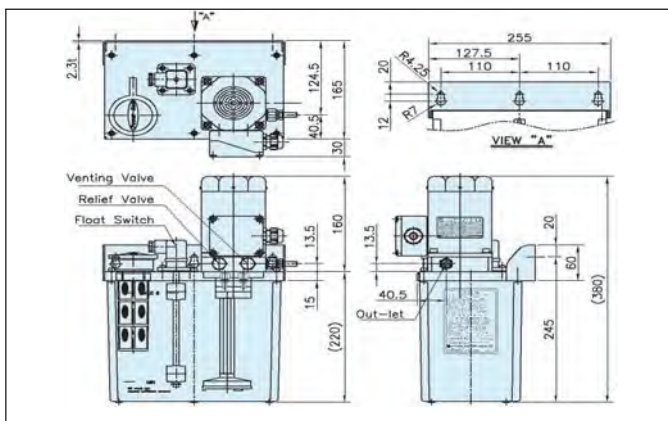
- 通过外部控制装置进行运转的间歇式泵，适合于对距离远，供油处多，高压，大流量的设备装置的润滑油供给。可以与定量式分配阀（ARD SERIES,PVO SERIES）组合使用。
- 内部安装的调节阀可以调节压力，并安装有油面感知设备，可在外面进行检测。
- 此泵为间接式泵，不可连续运转使用。
- 广泛适用于机床设备，印刷设备，食品设备，注塑设备，冲床及各种产业设备等。

- AMGP-053 type is a kind of intermittent pump in stalling outside controller. It is used mainly the remote location or many lubrication spots with measuring distributor.(ARD Series, PVO Series)
- As the pump is installed Relief valve and Float switch inside of pump. It is easy to control pressure and the oil shortage.
- As this type is an intermittent pump, the continuous operation should be prohibited.
- This pump is mainly used machine tools, printing, foods, injection machine, press and various industrial machine.

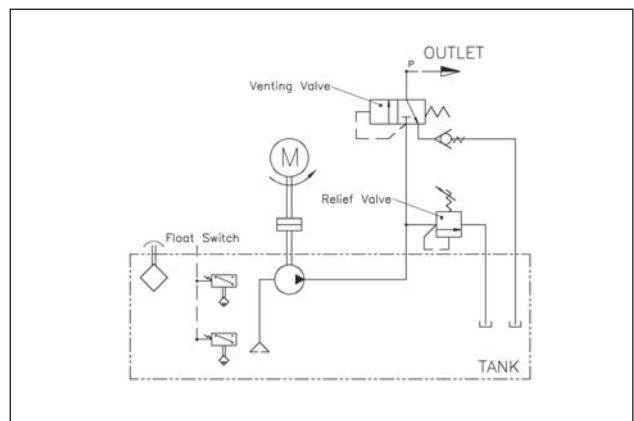
Type	Discharge volume 流量 cc/min	Working pressure 使用压力 MPa	Pressure range 压力范围 MPa	Viscosity 使用黏度 cSt	Out-let 吐出口
AMGP-053	420 500	2.8	0.8~3.0	20-1000	M14x1.5p : Standard { PT 1/4" : Option }

Motor Out-put 功率 W	Phase 相数 / Poles 级数	Fre- quency 频率 Hz	Rated voltage 电压 V	Current 电流 A
90	3Φ/4P	50	200/380/415	0.79/0.43/0.39
		60	220/380/440	0.63/0.37/0.39

External dimension 外形图

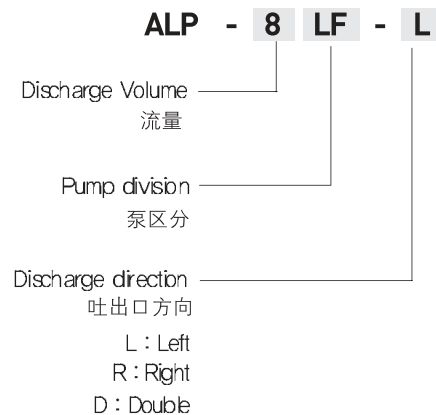


Circuit diagram 回路图





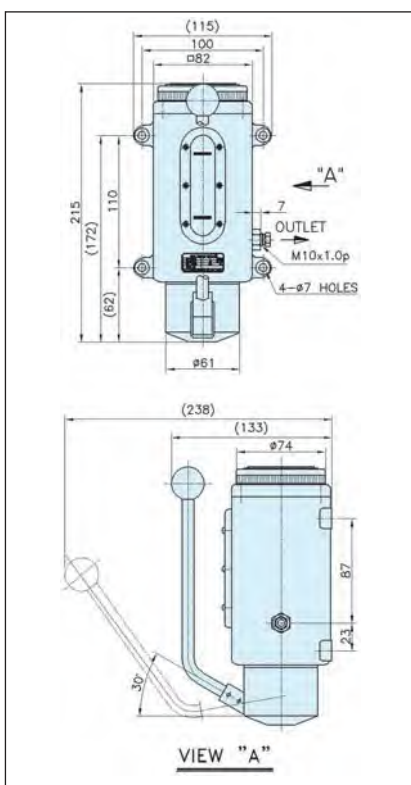
ALP-8LF Series



- 点动式泵使用方便，内置逆流阀防止逆流。
- 小而轻便安装容易，
- 适用于机床设备，印刷设备，食品设备，注塑设备，冲床及各种产业设备等。
- This type is a kind of manual lever pump, and it has a check valve inside to prevent the oil from reserved flowing.
- It is so light and small that easy location and can install 20~40 points.
- This pump is mainly used machine tools, printing, foods, injection machine, and various industrial machine.

Type	ALP-8LF
Discharge Volume 吐出流量 cc/st	8
Max' Pressure 最高压力 MPa	1.5
Supply Capacity 给油孔数 Point	1 ~ 40
Reservoir Capacity TANK流量 cc	600
Viscosity 使用粘度 cSt	30 ~ 1300
Out-let 吐出口 PT	1/8"
Net Weight 重量 Kg	1.4

External dimension 接线图

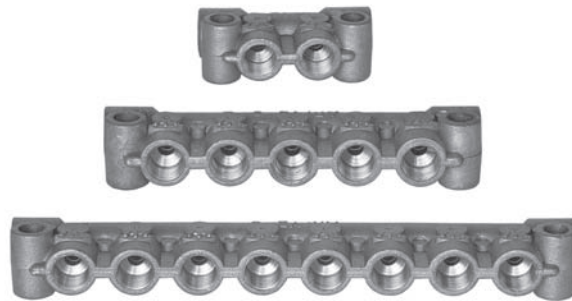


Applications 适用

- 使用液体: Oils
- 推荐用油: 冬令时 → 32cSt 이하
夏令时 → 68cSt 이하
- 材质
电机: 铝 (ALDC)
液面计: Plastic (PC)
- 供油方式: 定量式
- Type of fluid: Oils
- Recommended oil
Winter → below 32cSt
Summer → below 68cSt
- Material
Reservoir: Aluminum(ALDC)
Level gauge: Plastic(PC)
- Oil Supply method:
Proportional method



DB Series



DB - 4 M

Distributing points
分配阀孔数

Screw size if branch pipe
支管道规格

M : M8 × 1.0p

PT : PT 1/8"

Type	Central pipe 主管道	Branch pipe 支管道	Using pressure 使用压力
DB-※M	M8×1.0p	M8×1.0p	0.8 MPa
DB-※PT	PT 1/8"	PT 1/8"	0.8 MPa

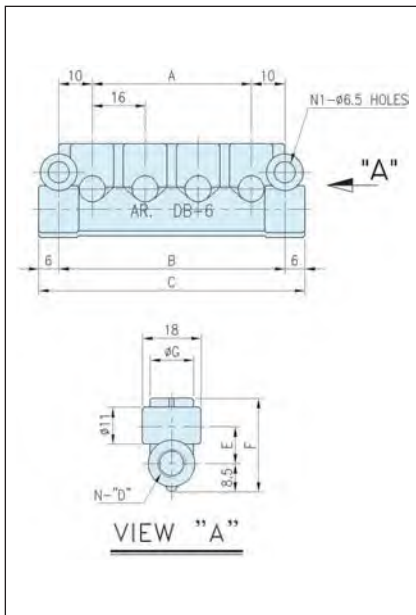
■ DB type为比例式分配阀，与阻抗式泵配套使用。

■ 可与Flow unit, Check valve等配套使用，排管口数从3个到10个。

■ DB type is a kind of proportional distributor using with resistive pump.

■ This type have 3-10 holes to use by combining flow unit and check valve.

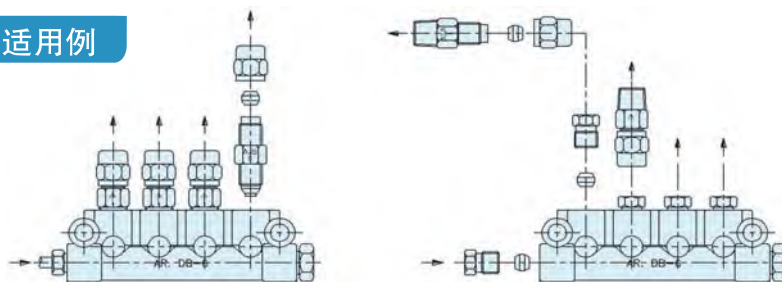
External dimension 外形图



Type	Point	Dimension									Net weight 重量 g
		A	B	C	D	E	F	G	N	N1	
DB-3M	3	-	-	30	M8×1.0p	9.5	23.5	14	3	1	31
DB-4M	4	16	36	48	M8×1.0p	11	28	13	4	2	65
DB-5M	5	32	52	64	M8×1.0p	11	28	13	5	2	82
DB-6M	6	48	68	80	M8×1.0p	11	28	13	6	2	102
DB-7M	7	64	84	96	M8×1.0p	11	28	13	7	2	123
DB-8M	8	80	100	112	M8×1.0p	11	28	13	8	2	145
DB-10M	10	112	132	144	M8×1.0p	11	28	13	10	2	186

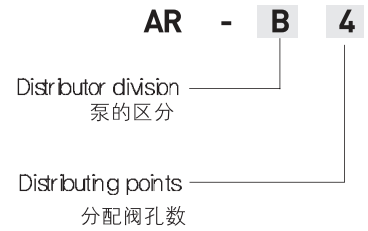
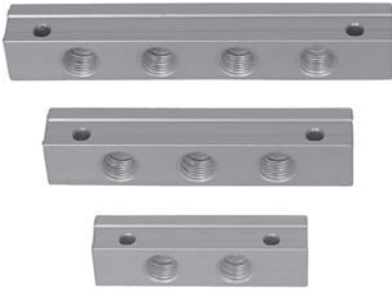
Type	Points	Dimension									Net weight 重量 g
		A	B	C	D	E	F	G	N	N1	
DB-3PT	3	-	-	30	PT 1/8"	9.5	23.5	14	3	1	31
DB-4PT	4	16	36	48	PT 1/8"	11	28	13	4	2	65
DB-5PT	5	32	52	64	PT 1/8"	11	28	13	5	2	82
DB-6PT	6	48	68	80	PT 1/8"	11	28	13	6	2	102
DB-7PT	7	64	84	96	PT 1/8"	11	28	13	7	2	123
DB-8PT	8	80	100	112	PT 1/8"	11	28	13	8	2	145
DB-10PT	10	112	132	144	PT 1/8"	11	28	13	10	2	186

Assemble flow unit 适用例



Oil Lubrication pumps

AR-B Series



Type	Central pipe 主管道	Branch pipe 支管道	Using pressure 使用压力
AR-B※	PT 1/8"	PT 1/8"	0,8 MPa

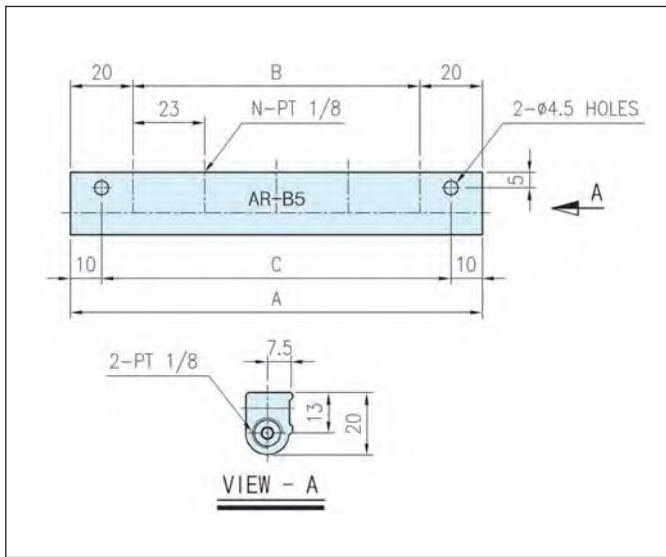
■ AR-B型作为比例式分配阀与阻抗式泵组合使用。

■ AR-B type is a kind of proportional distributor using with resistive pump.

■ 可与Flow unit, Check valve等配套使用, 排管口数从1个到10个。

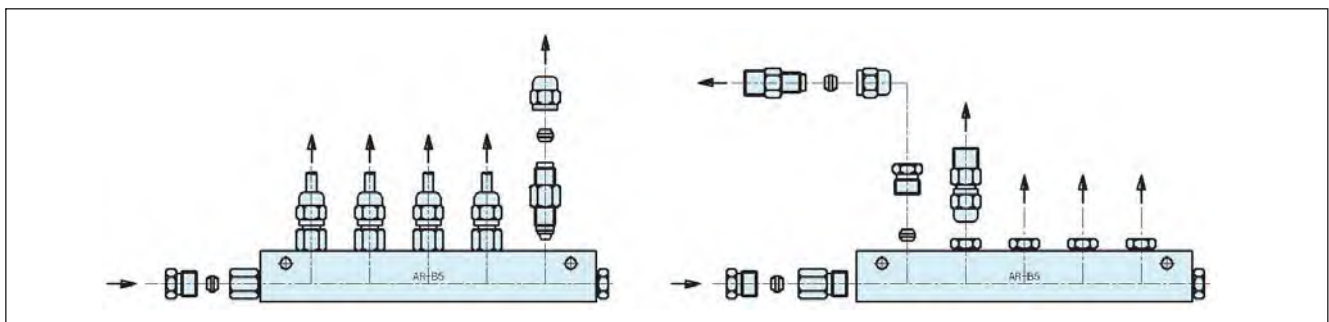
■ This type have 1-10 holes to use by combining flow unit and check valve.

Circuit diagram 回路图



Type	Point (N)	Dimension			Net weight 重量 g
		A	B	C	
B1	1	40	0	20	21
B2	2	63	23	43	33
B3	3	86	46	66	45
B4	4	109	69	89	57
B5	5	132	92	112	69
B6	6	155	115	135	81
B7	7	178	138	158	93
B8	8	201	161	181	105
B9	9	224	184	204	117
B10	10	247	207	227	129

Assemble flow unit 适用例





PVO Series



PVO - 3 M

Distributing points
分配阀孔数

Central pipe screw size
螺丝规格

No mark : PT 1/8"

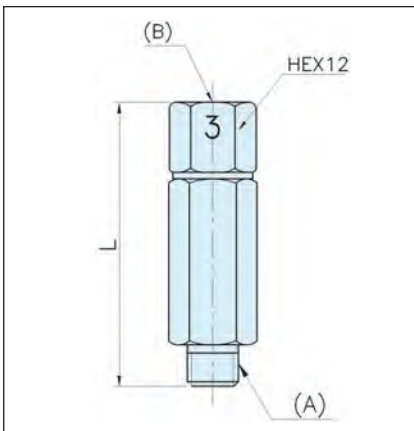
M8 : M8 × 1.0p

M10 : M10 × 1.0p

- PVO定量式阀适用于间接式供油系统，它通过活塞的工作将一定量的润滑油计量成所需的量进行供给。
- 流量的误差范围小，适用于精密润滑系统。
- 构成系统时与DB型分配阀配套使用。

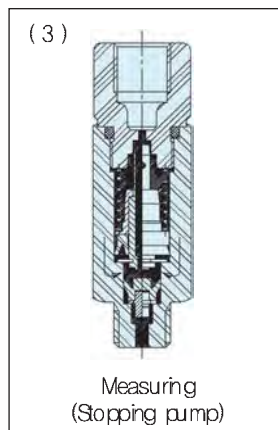
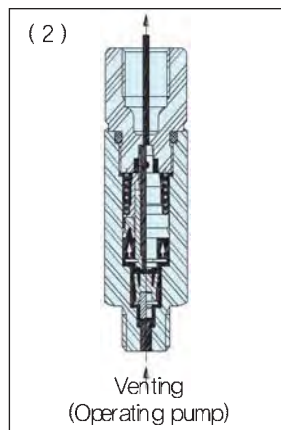
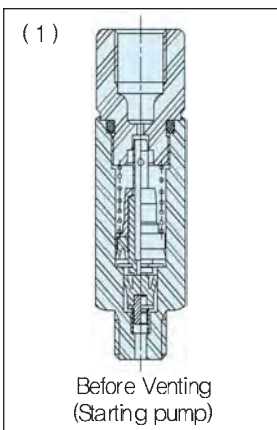
- The PVO measuring valve is made to use intermittent system, and can lubricate the oil by piston stroke.
- It is suitable to utilize precision lubricating system because of little allowance of oiling.
- It is combined with DB type distributor when installing system.

External dimension 外形图

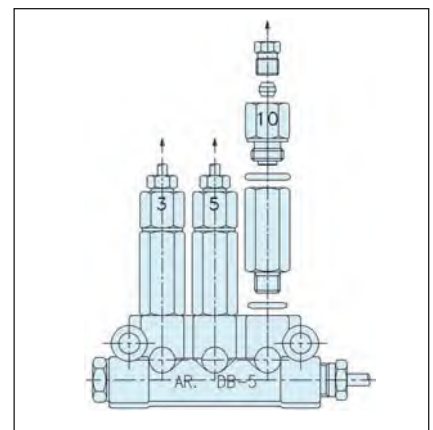


Type	Discharge Volume 流量 cc/st	Using pressure 使用压力 MPa	L mm	Bore of pipe	
				(A)	(B)
PVO-3	0.03	0.8-3.0	44.5	PT 1/8" M8 X 1.0P M10 X 1.0P	M8 X 1.0P
PVO-5	0.05	0.8-3.0	44.5		
PVO-10	0.10	0.8-3.0	44.5		
PVO-20	0.20	0.8-3.0	53.5		
PVO-30	0.30	0.8-3.0	53.5		
PVO-40	0.40	0.8-3.0	65.0		
PVO-50	0.50	0.8-3.0	65.0		

Assemble flow unit 适用例

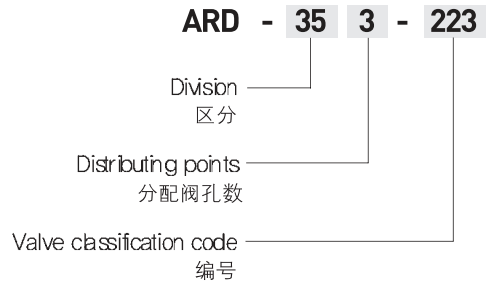
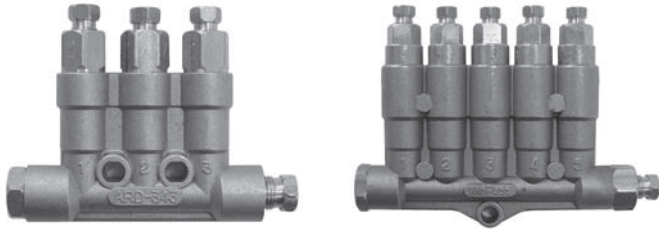


Example 适用例



Oil Lubrication pumps

ARD - 340 / 350 Series



■ ARD-340, 350定量式阀适用于间接式供油系统，它通过活塞的工作将一定量的润滑油计量成所需量进行供给。

■ The ARD-340, 350 of measuring valve is made to use intermittent system, and can lubricate the oil by piston stroke.

■ 流量的误差范围小，适用于精密润滑系统。

■ It is suitable to utilize precision lubricating system because of very tight allowance of oiling.

Type	Discharge Points 分配器孔数	Using pressure 使用压力 MPa	Bore of pipe		Net weight 重量 g
			Central pipe 主管道	Branch pipe 支管道	
ARD-342	2	0.8-3.0	M10x1.0p	M8x1.0p	115
ARD-343	3	0.8-3.0	M10x1.0p	M8x1.0p	163
ARD-345	5	0.8-3.0	M10x1.0p	M8x1.0p	249
ARD-352	2	0.8-3.0	M10x1.0p	M8x1.0p	239
ARD-353	3	0.8-3.0	M10x1.0p	M8x1.0p	314
ARD-355	5	0.8-3.0	M10x1.0p	M8x1.0p	464

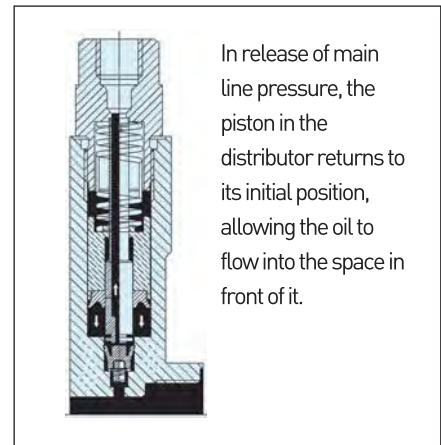
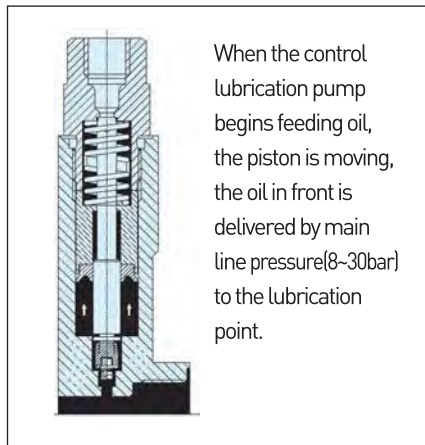
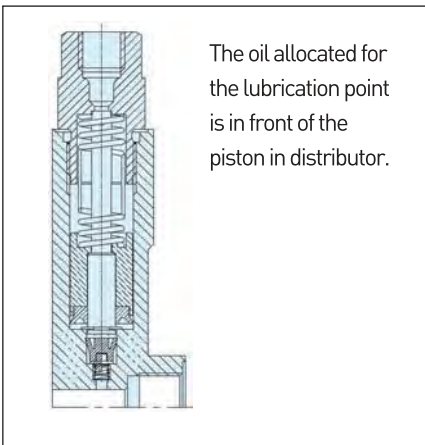
Valve Code No. 编码	Discharge Volume 流量 cc/st
1	0.03
2	0.06
3	0.10
4	0.16
3	0.1
5	0.2
6	0.4
7	0.6

Example to order 事例

In ARD-340 type if discharge point is 5 and discharge volumes are, 根据排管方式不同分为螺母连接式和插入式连接，特别是插入式可以缩短排管所需时间，有利于减少成本。

	0.06	0.06	0.10	0.03	0.03
Order code	2	2	3	1	1
Order No.	ARD-345-22311				

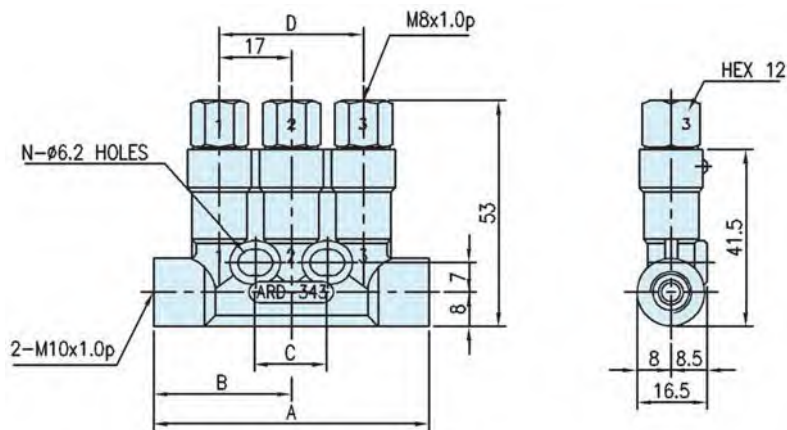
Operation Description 运体构造





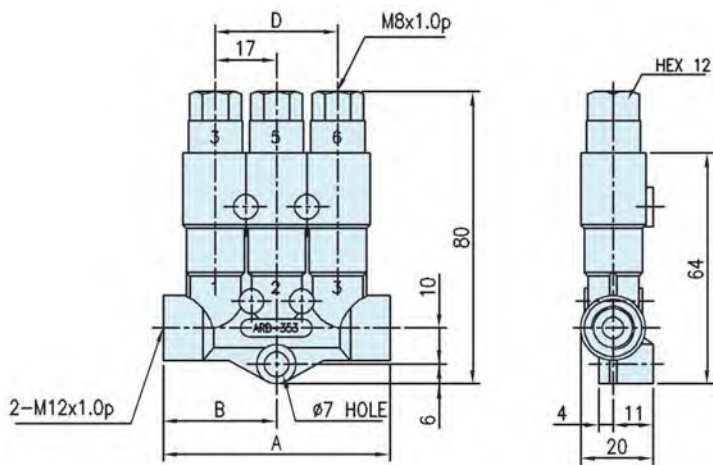
External dimension 外形图

ARD - 340 Series



Type	A	B	C	D	N
342	48	24	-	17	1
343	65	32.5	17	34	2
345	99	49.5	51	68	2

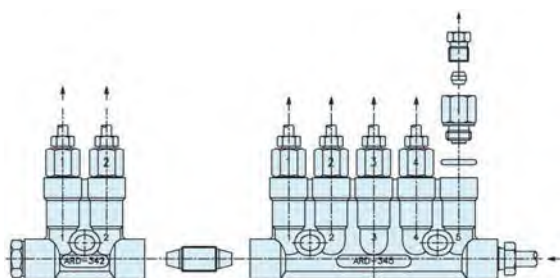
ARD - 350 Series



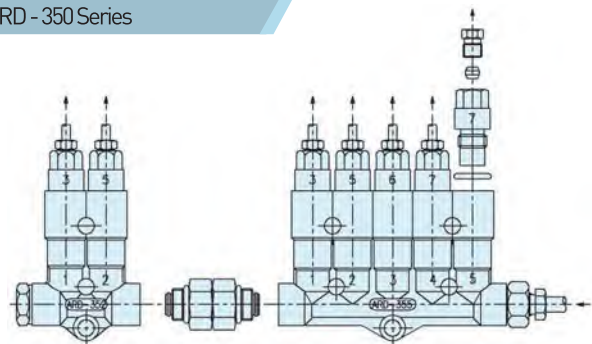
Type	A	B	D
352	45	22.5	17
353	62	31	34
355	95	47.5	68

Example for using Distributor connection 适用例

ARD - 340 Series



ARD - 350 Series



Oil Lubrication pumps

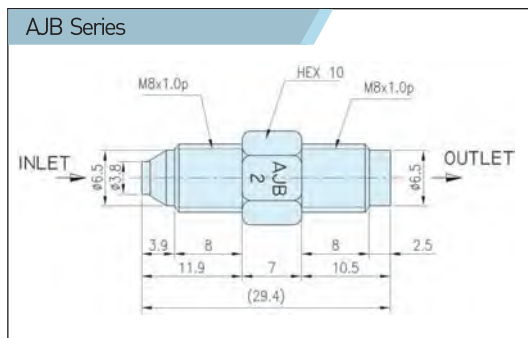
Flow unit - AJB, ASA



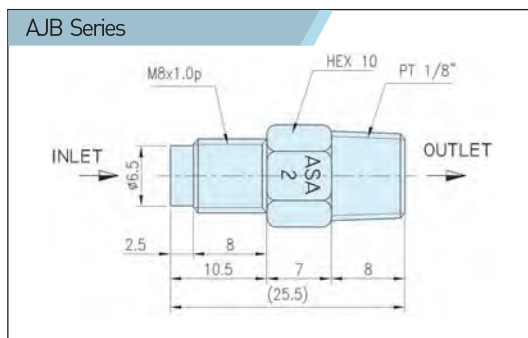
- Flow unit 作为比例式分配阀，与DB型分配阀组合使用成为AJB型，与设备供油处组合成为ASA型。
- 随着编号的不同供油的比例也不一样，编号越大其比例成倍增加。
- 标有液体的流向，且内置有止回阀防止逆流情况发生。

- The flow unit is a proportional distributor, one is AJB type to combine DB distributor, the other is ASA type to set units at the oiling points of machine side.
- It lubricates by code number of discharging volume, the code number increases, the discharging volume increases twice.
- The flowing direction is marked and the check valve protect the reversed direction working.

External dimension 外形图



Type	Code No. 编码	Flow rate 比力量 %	Using pressure 使用压力 MPa	Viscosity 黏度 cSt
AJB-03	03	1.2	0.15 ~ 2.0	20 ~ 500
AJB-02	02	2.5	0.15 ~ 2.0	20 ~ 500
AJB-0	0	5	0.15 ~ 2.0	20 ~ 500
AJB-1	1	10	0.15 ~ 2.0	20 ~ 500
AJB-2	2	20	0.15 ~ 2.0	20 ~ 500
AJB-3	3	40	0.15 ~ 2.0	20 ~ 500
AJB-4	4	80	0.15 ~ 2.0	20 ~ 500
AJB-5	5	160	0.15 ~ 2.0	20 ~ 500



Type	Code No. 编码	Flow rate 比力量 %	Using pressure 使用压力 MPa	Viscosity 黏度 cSt
ASA-03	03	1.2	0.15 ~ 2.0	20 ~ 500
ASA-02	02	2.5	0.15 ~ 2.0	20 ~ 500
ASA-0	0	5	0.15 ~ 2.0	20 ~ 500
ASA-1	1	10	0.15 ~ 2.0	20 ~ 500
ASA-2	2	20	0.15 ~ 2.0	20 ~ 500
ASA-3	3	40	0.15 ~ 2.0	20 ~ 500
ASA-4	4	80	0.15 ~ 2.0	20 ~ 500
ASA-5	5	160	0.15 ~ 2.0	20 ~ 500

Assemble flow unit 适用例

Before installing this system, check and handle carefully the direction of oil flow.

If not, it is possible to damage the pump by excessive turning of screw.



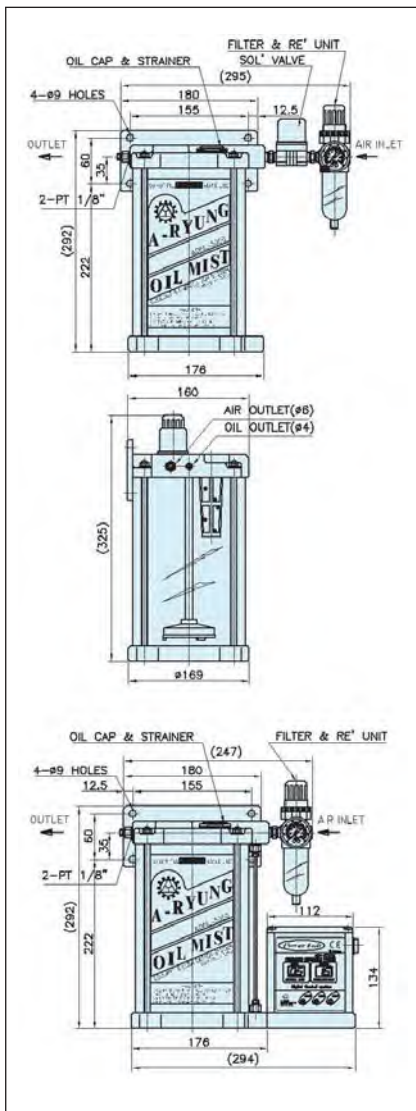
AOML-3000 Series



AOML - 3000 C - 220

- Reservoir Capacity
容量
- Controller
控制装置
- No Mark : Without
C : Built-in
- Voltage
电压

External dimension 外形图



- AOML-3000型油 mist不包括其他装置的泵，其利用空气压力将油或coolant通过喷嘴进行喷射的系统。
- AOML-3000C型内置有数字控制器，易于设定吐出时间。
- 主要适用于各种设备的chain, gear, trolley conveyer等润滑，还有冲压模具及roll feeder, 注塑设备等。
- 同时适用于tapping, drilling machine等在进行切削加工时的润滑及冷却使用。

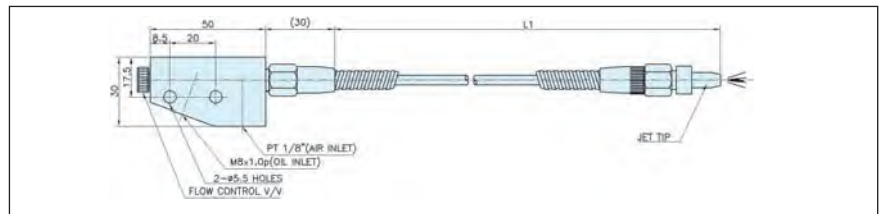
- AOML-3000 type is a kind of oil mist system, without pump, spraying oil or coolant by air pressure with nozzle jet.
- AOML-3000C type can be easily set the discharging time by inner digital controlling system.
- The main usage is to lubricate chain& gear of machine, trolley conveyor, press mold, roll feeder, separating paint of injection machine.
- It is used tapping, cutting of drilling machine for oiling and cooling.

Type	Working Pressure [Air] 气压 MPa	Reservoir Capacity 油箱容积 ℓ	Viscosity 使用黏度 cSt	Voltage 电压 V	Controller 控制板	Net Weight 重量 Kg
3000	0.1 ~ 0.3	3.0	2 ~ 200	110 / 220	×	4.7
3000C	0.1 ~ 0.3	3.0	2 ~ 200	110 / 220	Built-in	6.0

※Caution

Keep the air pressure down to avoid tank broken causing higher pressure. 空气压力过高会导致油箱的破损，必须保持使用压力以下。

Nozzle Jet



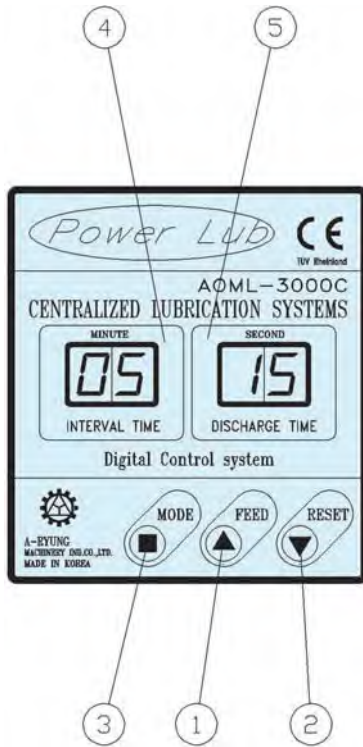
Type	Standard 标准 (mm)	Oil in-let 液体入口	Air in-let 空气入口	L1 (mm)	Net Weight 重量 (g)
JET-250	250	Ø4	Ø6	250	153
JET-300	300	Ø4	Ø6	300	172
JET-400	400	Ø4	Ø6	400	210

- 内置有流量调节阀，可进行流量调整。
- It is possible to control the discharge volume because it has control valve inside.



Oil Lubrication pumps

Panel description



- ① : Feed button
- ② : Reset button
- ③ : Mode button
- ④ : Interval FND
- ⑤ : Discharge FND

设定时间方法

1) 设定方法

MODE ■ : 设定开始, 移动, 审定结束

- ▲ : 数值上升
- ▼ : 数值下降

A) 首先按下③键MODE “■” 按钮, 设定时间间隔的数字就会闪动, 此时按①键 “▲” 按钮, 数值上升, 按②键 “▼” 按钮, 数值下降。将所需要的间隔时间设定完成后重新再按一次③键MODE “■” 按钮, 突出时间的数字就会闪动, 此时同样按① “▲” 按钮, 数值上升, 按②键 “▼” 按钮, 数值下降。所需吐出时间设置完成后, 按③键MODE “■” 按钮退出设定程序。

B) 如果设定中在十秒内没有任何数字的录入, 系统会默认以设定完成, 并自动转换到运行状态。

C) “▲”, “▼” 键每按一次就会增减一个数值, 如果一直按键数值就会一直增减。

2) RESET 作用

如果在运行过程中按 “RESET” 按钮, 将重新回到初始设定的运行状态。

3) FEED button 作用(点滴供油)

如果在运行状态下按 “FEED” 键, 面板上将显示 “FEED” 字样, 并且在按的时间内液体会正常的吐出, 这和设定时间无关。该键在首次排管时, 便于排出管内空气后利用电动进行注油。

Setting instruction of digital timer

1) How to set the timer

MODE ■ : Starting set, Move, Finishing set.

- ▲ : Numbers up
- ▼ : Numbers down

A) If you press the button “■” one time, the interval time mode begins blinking. “▲” button increases the numbers to set the interval time and “▼” decreases the numbers. When it finished, press “■” button again and the discharge volume time mode blinking, “▲” button leads to increase numbers and “▼” to decrease the discharge time. Press again the MODE “■” to exit the setting program.

B) If you don't press the button within 10 seconds, the timer recognizes the setting time is ended and operates automatically.

C) When you press “▲”, “▼” button every one time, every one number increases(decreases).

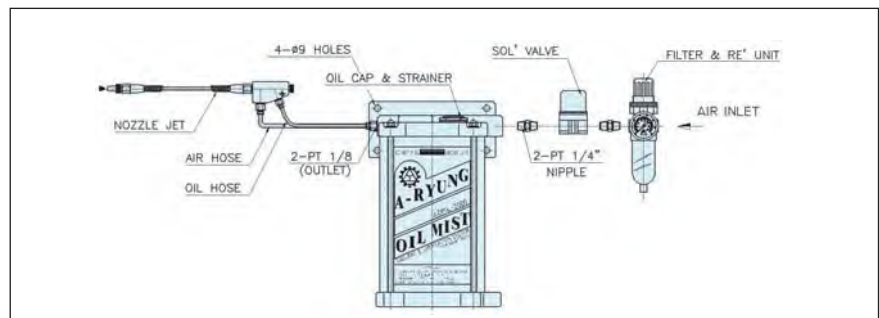
2) RESET function

When you push the “RESET” button during the operation, the mode returns to starting set mode.

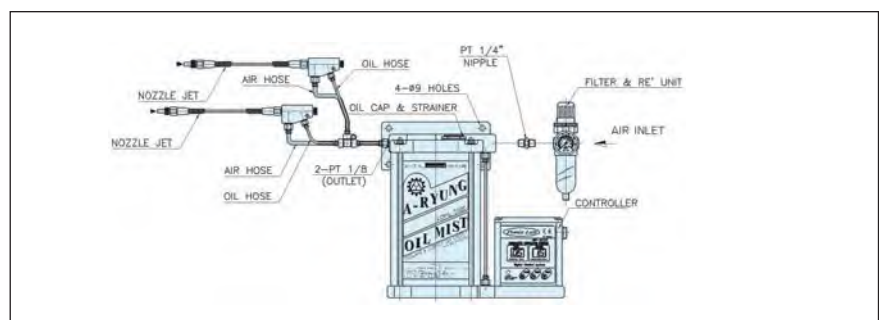
3) FEED button (manual oiling)

If you press “FEED” button during the operation, the oil discharges regardless the setting mode, also this button can be used to remove the air in pipe or by manual.

Single jet circuit view



Multiple jet circuit view





AOL 4 Series

AOL 4 - M5



Pump division
泵的区分

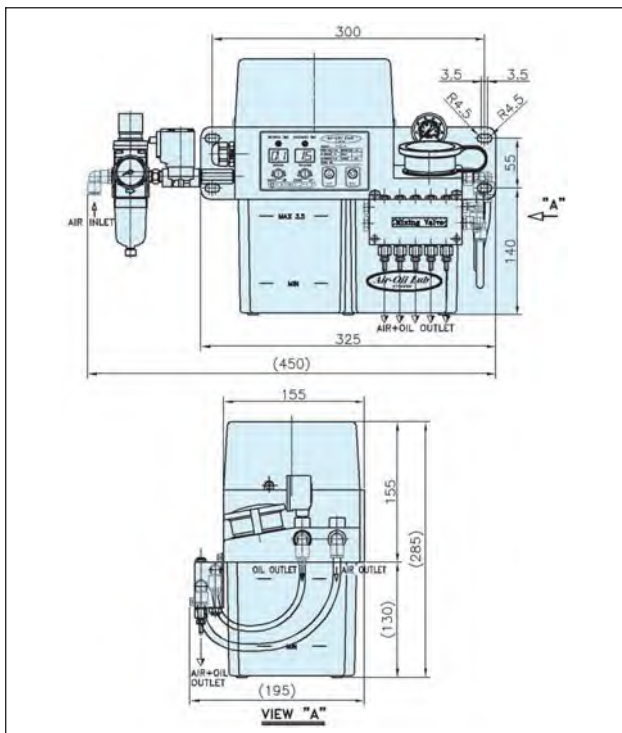
Mixing valve point
混合分配阀孔数量

- 适用于超高速主轴用轴承的润滑及冷却，效果优良。
- 内置有控制面板可以自动的进行间接式润滑供油，并且易于感知及识别运转中有无异常情况的产生。
- 空气与油混合喷射的混合阀通过定量式润滑分配器进行使用，适用在高速精密设备上使用。

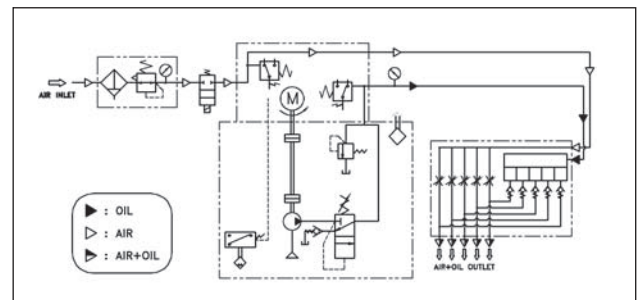
- AOL Series is high performance for lubricating and cooling efficiency for high speed spindle bearings.
- The controller in cabinet automatically operates by interval time so that it can check the troubles easily during working time.
- As measuring type of distributor, Mixing valve with air and oil mixed is suitable for high speed operating machine.

Type	Discharge volume 流量 cc/st	Discharge point 分配阀孔数 (Air+Oil)	Air Pressure 空气压力 MPa	Viscosity 黏度 cSt	Lubrication Method 润滑方式	Control Method 控制方式	Air In-let	Air-Oil Out-let
AOL 4	0.03 ~ 0.16	2 ~ 6	0.3 ~ 0.5	10 ~ 100	Measuring 定量式	Digital 数字	PT 1/4" (Ø8)	M8 × 1.0p (Ø4)

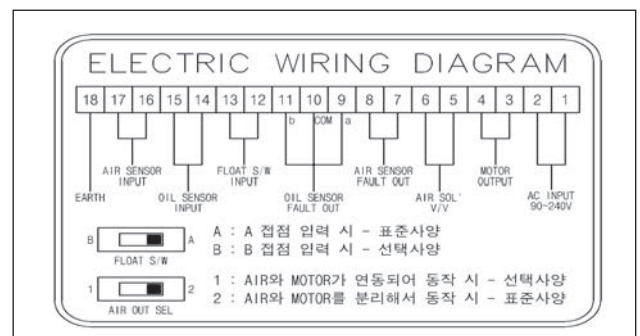
External dimension 外形图



Circuit diagram 回路图

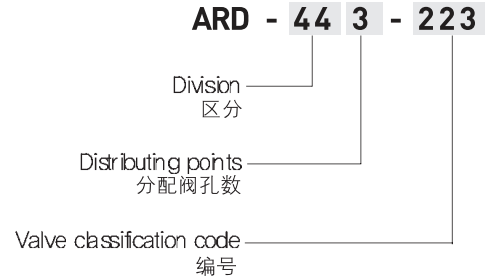
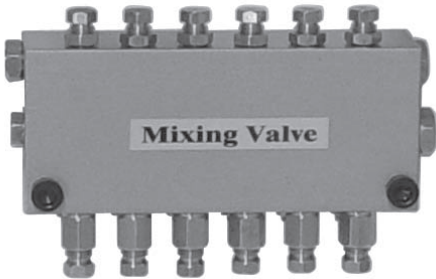


Electric connection 接线图



Oil Lubrication pumps

ARD - 440 Series



- ARD-440型分配阀是将空气与油混合喷射的定量式润滑分配阀，适用于高速精密设备上使用。
- 由于是润滑油空气混合供给，润滑部分的温度上升将被遏制，因此即使在高速回的设备上使用也可以正常供给。
- 内置有空气调节阀，易于调节润滑范围及根据其用途调整流速和供压的情况。

- ARD-440 type is a mixing valve spaying oil and air together. It is suitable to use high and precise machine system.
- It maintains low temperature to operate high speed operation provided air and oil.
- This type has inner the air controller to adjust easily air pressure according to usage and lubricating area.

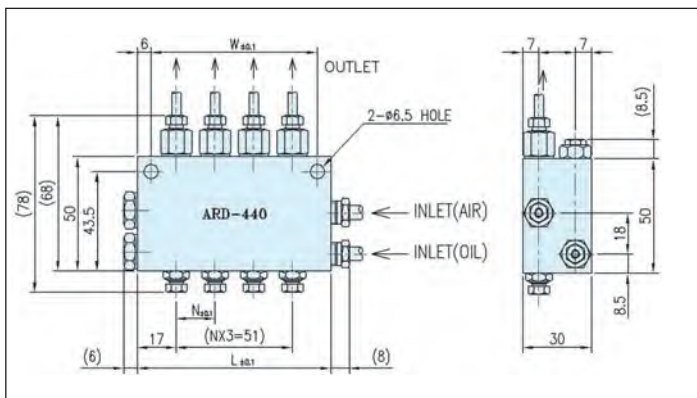
Type	Discharge Points 分配器孔数	Using pressure 使用压力 MPa	Bore of pipe		Net weight 重量 g	Valve Code No. 编码	Discharge Volume 流量 cc/st
			Central pipe 主管道	Branch pipe 支管道			
ARD-442	2	0.8-3.0	M10×1.0p	M8×1.0p	310	1	0.03
ARD-443	3	0.8-3.0	M10×1.0p	M8×1.0p	400	2	0.06
ARD-444	4	0.8-3.0	M10×1.0p	M8×1.0p	490	3	0.10
ARD-445	5	0.8-3.0	M10×1.0p	M8×1.0p	580	4	0.16
ARD-446	6	0.8-3.0	M10×1.0p	M8×1.0p	670		

Example to order 适用例

In ARD-440 type if discharge point is 5 and discharge volumes are, 选择ARD-440系列时，分配阀孔数为5时.

	0.06	0.06	0.10	0.03	0.03
Order code	2	2	3	1	1
Order No.	ARD-445-22311				

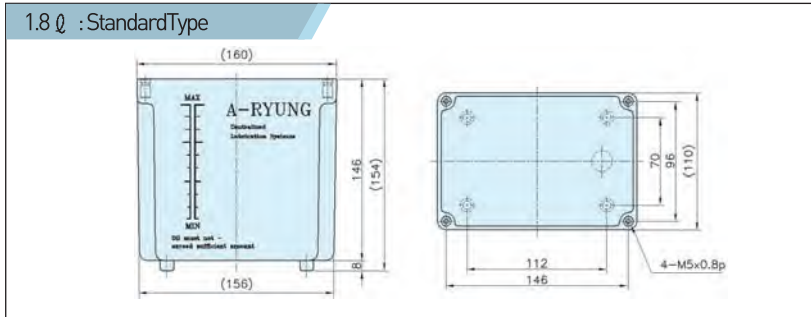
External dimension 外形例



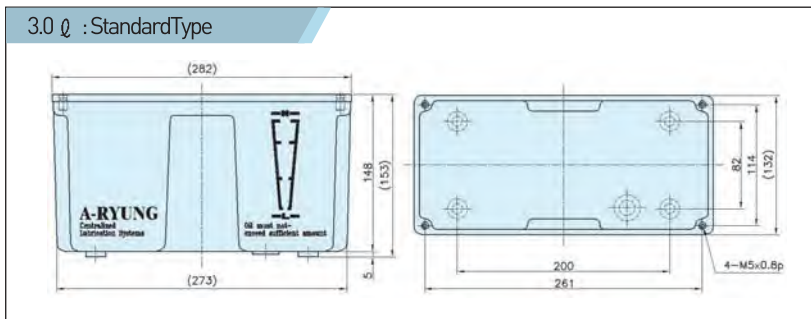
Type	Discharge point 分配器孔数	N	W	L
ARD-442	2	17	39	51
ARD-443	3	17	56	68
ARD-444	4	17	73	85
ARD-445	5	17	90	102



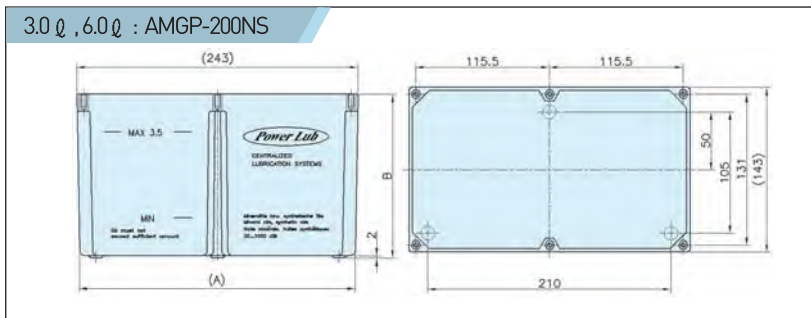
Oil Reservoir



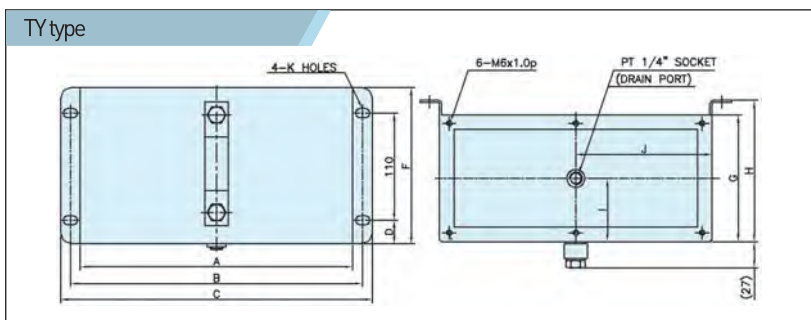
Type 型号	T1.8
Total Capacity 总容量	2.0 ℓ
Effective Capacity 有效容量	1.8 ℓ
Applicable pump 适用泵	01A(F), 01M(F) 01S(F), 01NS 013(F), 015(F)



Type 型号	T03
Total Capacity 总容量	4.0 ℓ
Effective Capacity 有效容量	3.0 ℓ
Applicable pump 适用泵	01AF-T03 01MF-T03 025N 025NS



Type 型号	T03	T06
Total Capacity 总容量	4.0 ℓ	7.0 ℓ
Effective Capacity 有效容量	3.0 ℓ	6.0 ℓ
(A)	238	142
(B)	235	217
Applicable pump 适用泵	200NS -T03	200NS -T06



- 材质 Material
 - * 油箱 Tank : Steel
 - * 油面 Level gauge : 塑料 Plastic

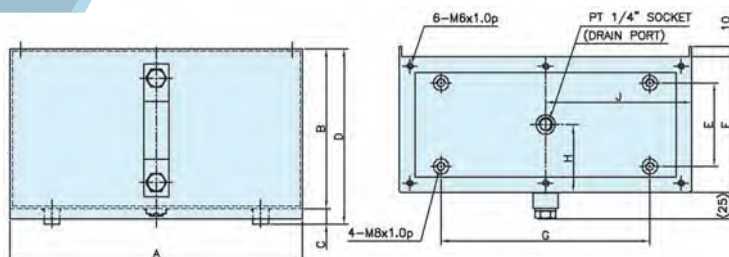
Type	Total Capacity 适用量	Effective Capacity 有效容量	A	B	C	D	F	G	H	I	J	K	Standard Applicable pump 适用泵
T03-TY	5 ℓ	3 ℓ	280	300	320	24	160	130	145	65	140	9.5x14.5	AMGP-01N, 02N AMGP-03, 05
T06-TY	8 ℓ	6 ℓ	300	320	346	24	160	190	205	95	40	9.5x14.5	
T12-TY	13 ℓ	12 ℓ	363	386	416	24	160	228	234	114	40	11x16	
T20-TY	23 ℓ	20 ℓ	470	500	520	29	160	310	315	155	40	12x17	



Oil Lubrication pumps

Oil Reservoir

TZ type

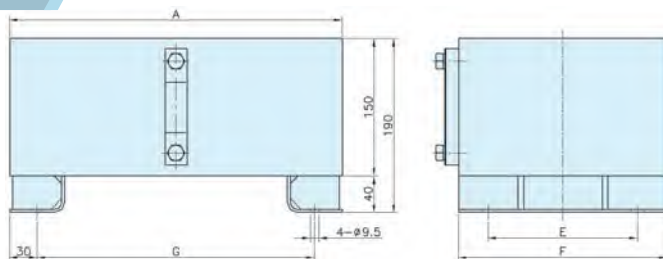


■ 材质 Material

- *油箱 Tank : Steel
- *油面 Level gauge : 塑料 Plastic

Type	Total Capacity 适用量	Effective Capacity 有效容量	A	B	C	D	E	F	G	H	J	Standard Applicable pump 适用泵
T03-TZ	5 ℓ	3 ℓ	280	153	15	168	80	130	200	65	140	AMGP-01N, 02N, AMGP-03, 05
T06-TZ	8 ℓ	6 ℓ	300	153	15	168	120	190	240	95	40	
T12-TZ	13 ℓ	12 ℓ	363	153	15	168	160	228	280	114	40	
T20-TZ	23 ℓ	20 ℓ	470	159	15	174	240	310	390	155	50	

TZ1 type

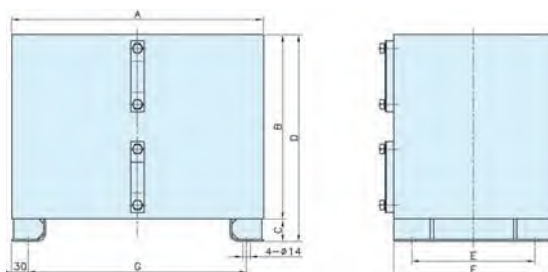


■ 材质 Material

- *油箱 Tank : Steel
- *油面 Level gauge : 塑料 Plastic

Type	Total Capacity 适用量	Effective Capacity 有效容量	A	E	F	G	Standard Applicable pump 适用泵
T12-TZ1	13 ℓ	12 ℓ	363	163	228	303	AMGP-03, 05
T20-TZ1	23 ℓ	20 ℓ	470	245	310	410	AMGP-03, 05

TZ2 type



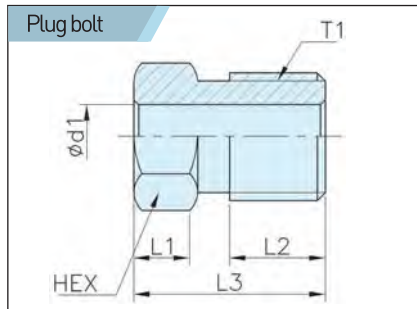
■ 材质 Material

- *油箱 Tank : Steel
- *油面 Level gauge : 塑料 Plastic

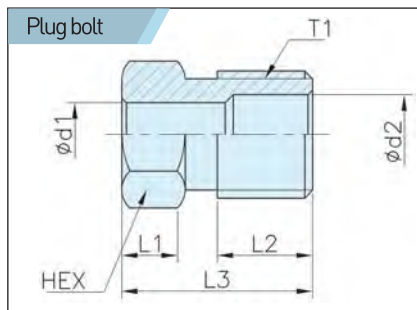
Type	Total Capacity 适用量	Effective Capacity 有效容量	A	B	C	D	E	F	G	Standard Applicable pump 适用泵
T40-TZ2	5 ℓ	3 ℓ	450	330	40	370	285	390	220	AMGP-03, 05
T60-TZ2	8 ℓ	6 ℓ	600	280	50	330	375	540	310	AMGP-03, 05

Oil Lubrication pumps

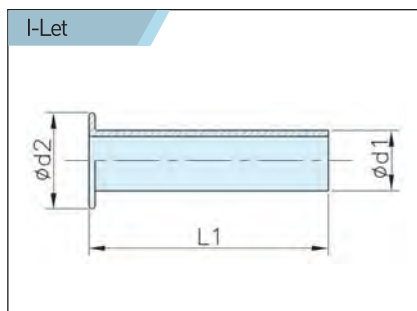
Fitting



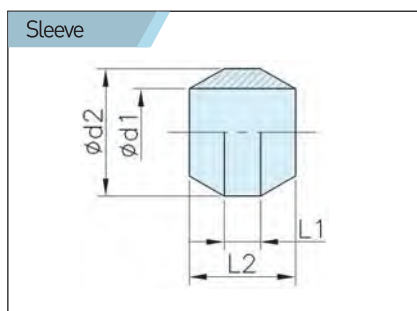
Type	Pipe dia	d1	L1	L2	L3	T1	Hex	Material
TA-4	$\phi 4$	4.1	4	6	12	M8 \times 1.0p	8	BsBD3
TA-6	$\phi 6$	6.1	4	7	13	M10 \times 1.0p	10	BsBD3



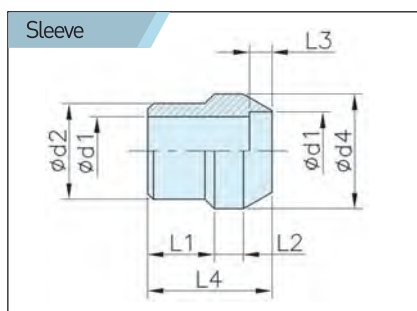
Type	Pipe dia	d1	d2	L1	L2	L3	T1	Hex	Material
TAD-4	$\phi 4$	4.1	5	4	6	12	M8 \times 1.0p	8	BsBD3
TAD-6	$\phi 6$	6.1	7	4	7	13	M10 \times 1.0p	10	BsBD3
TAD-S4	$\phi 4$	4.1	5	4	6	12	M8 \times 1.0p	8	SUM24L
TAD-S6	$\phi 6$	6.1	7	4	7	13	M10 \times 1.0p	10	SUM24L



Type	Pipe dia	d1	d2	L1	Material
AL-4	$\phi 4$	2.5	3.9	10	BsBD3
AL-6	$\phi 6$	4	5.8	10	BsBD3

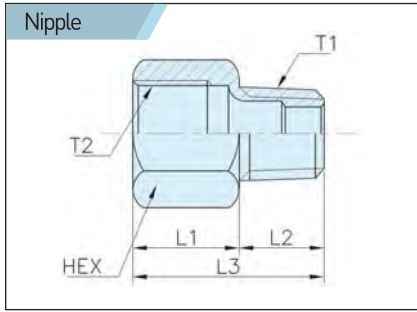


Type	Pipe dia	d1	d2	L1	L2	Material
TB-4	$\phi 4$	4.1	6	1.7	5	BsBD3
TB-6	$\phi 6$	6.1	8	2.5	6	BsBD3

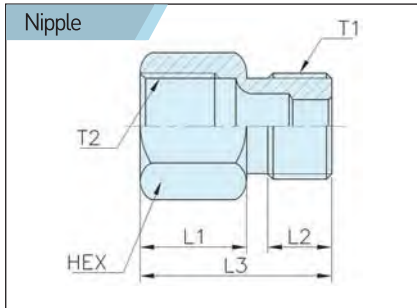


Type	Pipe dia	d1	d2	d3	L1	L2	L3	Material
TBD-4	$\phi 4$	4.1	5	6	3	2	6.5	BsBD3
TBD-6	$\phi 6$	6.1	7	8	4	2	7.5	BsBD3

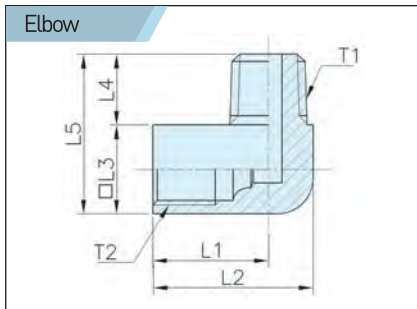
Fitting



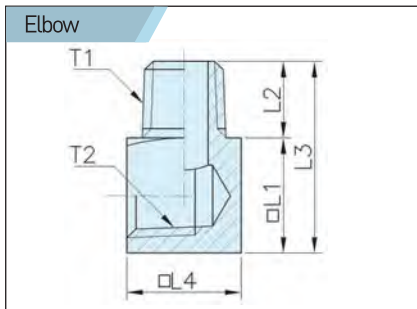
Type	Pipe dia	L1	L2	L3	T1	T2	Hex	Material
TD4-1/8K1	Ø4	10	8	18	PT1/8"	M8x1.0p	10	BsBD3
TD4-1/8K	Ø4	10	8	18	PT1/8"	M8x1.0p	11	BsBD3
TD6-1/8K1	Ø6	10	8	18	PT1/8"	M10x1.0p	12	BsBD3
TD6-1/8K	Ø6	10	8	18	PT1/8"	M10x1.0p	14	BsBD3
TD6-12K	Ø6	10	8	18	M12x1.0p	M10x1.0p	14	BsBD3



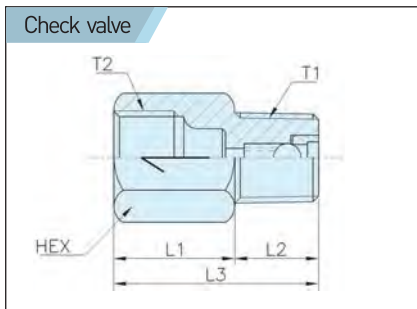
Type	Pipe dia	L1	L2	L3	T1	T2	Hex	Material
TD6-10	Ø6	10	6	18	M10x1.0p	M10x1.0p	12	BsBD3
TD6-12	Ø6	10	6	18	M12x1.0p	M10x1.0p	17	BsBD3



Type	Pipe dia	L1	L2	L3	L4	L5	T1	T2	Material
TH4-1/8K1	Ø4	13	18	10	8	18	PT 1/8"	M8x1.0p	BsBD3
TH6-1/8K1	Ø6	16	22	12	10	22	PT 1/8"	M10x1.0p	BsBD3
TS6-10K	Ø6	18	24.2	14	11	25	M10x1.0p	M10x1.0p	ZnDC
TS6-1/8K	Ø6	18	24.2	14	11	25	PT 1/8"	M10x1.0p	ZnDC



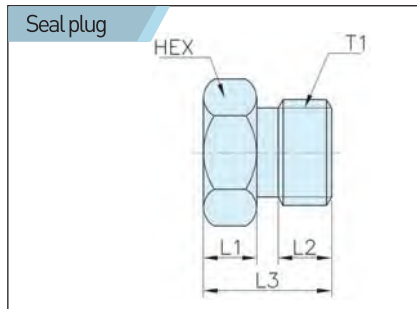
Type	L1	L2	L3	L4	T1	T2	Material
T1-1/8K1	12	8	21	12	PT 1/8"	PT 1/8"	BsBD3



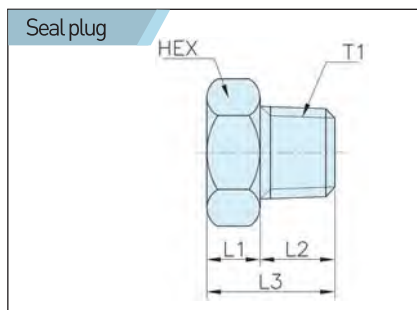
Type	Pipe dia	L1	L2	L3	T1	T2	Hex	Material
TC-4	Ø4	14.5	9	23.5	PT 1/8"	M8x1.0p	10	BsBD3
TC-6	Ø6	14	10	24	PT 1/8"	M10x1.0p	12	BsBD3

Oil Lubrication pumps

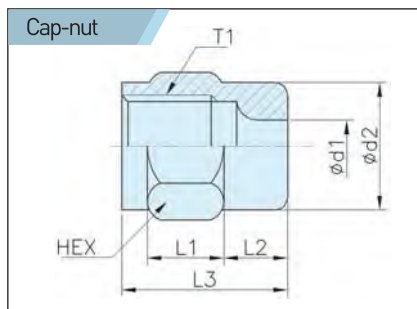
Fitting



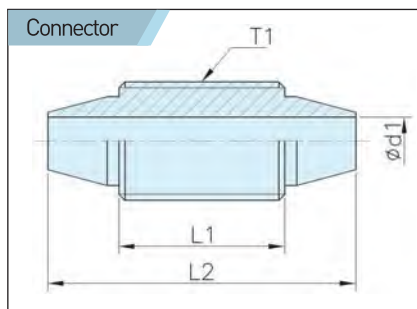
Type	L1	L2	L3	T1	Hex	Material
TG-8	4	5	11	M8x1.0p	12	BsBD3
TG-10	5	5	12	M10x1.0p	14	BsBD3
TG-12	5	6	13	M12x1.0p	17	BsBD3



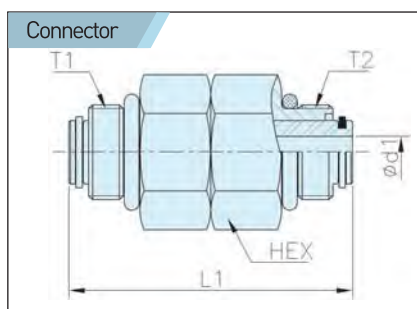
Type	L1	L2	L3	T1	Hex	Material
TG-1/8K	4	7	11	PT 1/8"	12	BsBD3



Type	Pipe dia	d1	d2	L1	L2	L3	T1	Hex	Material
TN-4	$\phi 4$	4.1	10	6	5	13	M8x1.0p	10	BsBD3
TN-6	$\phi 6$	6.1	12	6	5	13	M10x1.0p	12	BsBD3



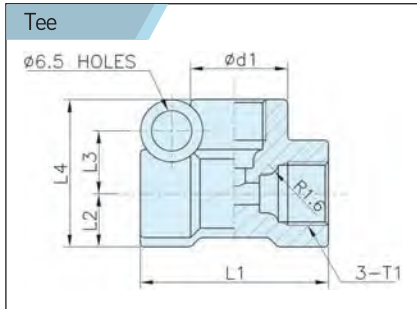
Type	d1	L1	L2	T1	Material
RD-340	4	14	26	M10x1.0p	BsBD3



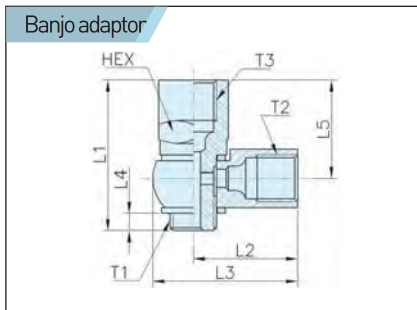
Type	d1	L1	L2	T1	Hex	Material
RD-350	4	36	M12x1.0p	M12x1.0p	12	BsBD3



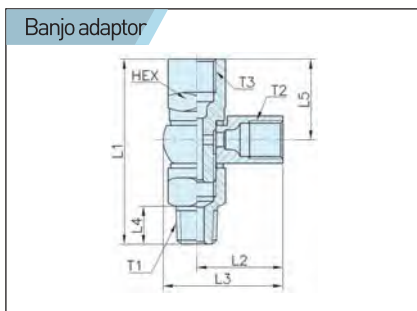
Fitting



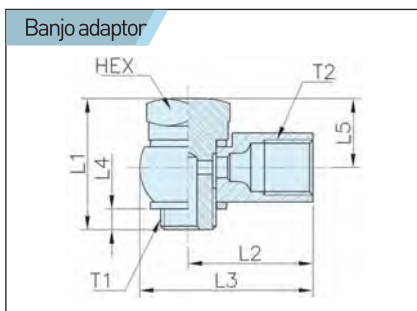
Type	d1	L1	L2	L3	L4	T1	Material
KD-4	14	30	8.5	9.5	23.5	M8x1.0p	ZnDC
KD-6	14	30	8.5	9.5	23.5	M10x1.0p	ZnDC



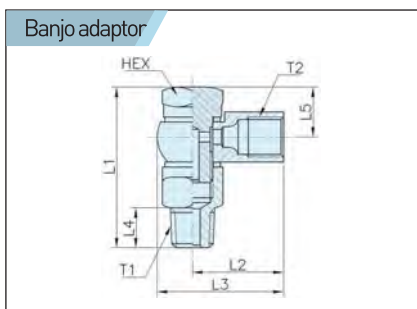
Type	Pipe dia	L1	L2	L3	L4	L5	T1	T2	T3	Hex	Material
BAS4-8	Ø4	26	18	25	5	15	M8x1.0p	M8x1.0p	M8x1.0p	12	BsBD3
BAS6-10	Ø6	30.5	22	29	6	16.5	M10x1.0p	M10x1.0p	M10x1.0p	14	BsBD3



Type	Pipe dia	L1	L2	L3	L4	L5	T1	T2	T3	Hex	Material
BAS4-10K	Ø4	37	18	25	8	15	M10x1.0p	M8x1.0p	M8x1.0p	12	BsBD3
BAS6-12K	Ø6	40.5	22	29	8	16.5	M12x1.0p	M10x1.0p	M10x1.0p	14	BsBD3



Type	Pipe dia	L1	L2	L3	L4	L5	T1	T2	Hex	Material
BA4-8	Ø4	21	18	25	5	10	M8x1.0p	M8x1.0p	12	BsBD3
BA6-10	Ø6	25.5	22	29	6	11.5	M10x1.0p	M10x1.0p	14	BsBD3



Type	Pipe dia	L1	L2	L3	L4	L5	T1	T2	Hex	Material
BA4-10K	Ø4	32	18	25	8	10	M10x1.0p	M8x1.0p	12	BsBD3
BA6-12K	Ø6	35.5	22	29	8	11.5	M12x1.0p	M10x1.0p	14	BsBD3



不良原因及对策

不良状态		原因	对策
产品不转	没有启动声音	电源断路, 接触不良	确认电源, 确认接触
		保险丝断路	更换保险丝
		过电流保护装置故障	解锁过电流保护装置
		电机线圈断路	委托给工厂
		电机过热	充分的休息时间 (INTERVAL TIME) 电机温度降低后会正常启动
		液位过低 (液位传感器启动)	加油 (解锁液位传感器)
	有启动声音	电压低	确认额定电压
		轴承磨损导致得固着	更换轴承, 委托给工厂
		定子和转子接触	委托给工厂
		泵头内部卡死异物	去除异物
产品运转	流量不够	吸入不浪	确认过滤网堵死, 空气混入, 管道堵死.
		回转不良 (反转)	三相中交叉更换两相
		使用油的粘度过高或过低	维持适当的粘度 (30~1000cst)
		阀门设定问题	调整阀门
	压力降低	压力设定问题	调压阀调节
		管道或连接口漏油	分配阀及管道连接口拧紧
	发生噪音 压力不均衡	空气混入过滤网堵死	液面过低, 吸入管道确认 过滤网清洗, 油粘度确认
	产品异常动作	空气混入	液面过低, 吸入管道确认 确认密封状态
		齿轮磨损	委托给工厂

Symptom		Probable cause	Remedy
No rotation	No operational sound	No input power, Bad power connection	Check connections
		Fuse outage	Replace fuse
		Over-voltage protection trip	Turn off over-voltage protection
		Motor wiring disconnection	Requires repair service
		Overheating of the motor	Set sufficient interval time. When the heat cools down, the system will return to normal condition.
		Lowering of the oil level (Turn on the float switch)	Refill with oil (Turn off the float switch)
	Operational sound	weak voltage	Check voltage rating
		Worn-out bearing causing sticking	Replace bearing, Requires repair service
		Rotor strikes stator	Requires repair service
		foreign materials in the pump gear	Remove foreign materials
Insufficient discharge	Insufficient suction	Check for filter blockage, air mixture, and pipe obstruction	
	Inferior revolution of the pump	Switch two of the three circuits	
	Improper viscosity of oil	Maintain an optimum level of viscosity (30~1000cSt)	
	Improper serring of pipes	Adjust valve	
Rotation	Falling pressure	Pressure set too low	Adjust relief valve
		Leakage at the pipes and connectors	Tighten connections at pipe connectors and distribution blocks
	Noise and irregular pressure	Cavitation phenomena (air mixture and pipe blockage)	Check oil level, intake pipes, filter cleanliness, and oil viscosity
	Irregular performance of pump	Air mixture	Check oil level, intake pipes and seals
Worn-out gear		Requires repair service	

MEMO

MEMO

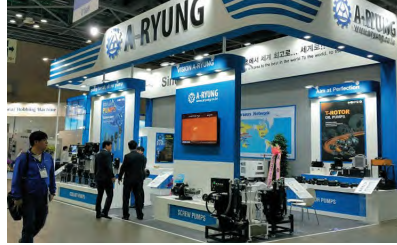
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亚隆伴随着机床事业的发展!!!

A-RYUNG The leading (pump) manufacturer in Korea.
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▲2008년 5월 전국중소기업인태회 평택산업발전 수여식



▲2016년 4월 Simitos 전시회



▲가공 Line 전경



▲조립 대기 공정



▲Coolant pump 조립 Line



▲T-rotor pump 조립 Line

- 1976. 5 亚隆机工(株)成立
- 1980. 4 商工部指定为油泵专门企业(No.79-118)
- 1982. 2 指定为近代化实践计划承认企业
(中小企业振兴工业园No.81-208)
- 1982. 5 获优秀企业总统表彰(No.54709)
- 1987. 9 被选定为国产机器开发优秀企业。
获副总理奖(No.87-104)
- 1992. 12 获自觉缴纳税功劳奖牌。(国税厅)
- 1993. 5 获海外市场出口产业奖
(大韩贸易振兴公司)
- 1996. 11 获“CE”欧洲安全规格认证。
- 1999. 6 “EM”机械类,部门原材料优秀品质规格认证
(韩国技术标准园No.1999-039)
- 1999. 11 获ISO9001质量经营体系认证(KSA)
- 2000. 10 获“CSA-c-us”美国及加拿大安全规格认证
(CSA INTERNATIONAL)
- 2000. 11 获出口功劳产业资源部长官奖。
- 2003. 11 获贸易振兴经济发展功劳产业资源部长官奖。
- 2003. 12 出口功劳全罗南道分公司获奖。
- 2004. 11 中国当地法人成立“亚隆机工(大连)有限公司”
- 2005. 12 获“车床机械发展”功劳国务院总理奖。
- 2006. 12 纪念贸易日获100万美元出口奖。
- 2007. 4 企业部署研究所成立
- 2007. 9 “MAIN-BIZ”(经营创新中小企业)认证“AA”等级
- 2007. 10 取得SINGLE PPM 认证
- 2007. 10 “INNO-BIZ”(技术创新型中小企业)认证
- 2008. 5 获得铜塔产业勋章
- 2009. 2 “NRTL”北美安全规格认证
- 2009. 3 国税局表彰
- 2010. 11 高效率电机认证
(0.75kW以上)
- 2012. 2 全罗南通出口奖
- 2014. 2 通过高效率电机认证(IE3)
- 2014. 10 崇高的企业家奖
- 2015. 3 荣获模范纳税人奖章
- 2015. 12 荣获贸易纪念日出口300万美元奖章

- 1976. 5 Established as A-RYUNG Machinery Industry Co, Ltd.
- 1980. 4 Designated technical manufacturer of oil pump by the Ministry of Trade and Industry.
- 1982. 2 Designated as an Approved Company of Systematization of Small & Medium Industry by the Ministry of Trade and Industry.
- 1982. 5 Awarded the Korea Presidential Citation for an Excellent Small & Medium Enterprise.
- 1987. 9 Awarded Excellent company for domestic machine development by the Deputy Prime Minister.
- 1992. 12 Awarded Self-Control company for National Tax by National Tax Office.
- 1993. 5 Awarded an Export Industry Prize for Overseas Market by the Korea Trade Center. (KOTRA)
- 1996. 11 Authorized Conformity EC declaration by TÜV Rheinland.
- 1999. 6 Obtaining Certification for EM Machinery, Spare parts by Korea Technique Standard Association.
- 1999. 11 Obtaining the ISO 9001 Certification by the KSA-QA supported by IQ-NET.
- 2000. 10 Obtained the CSA-c-us mark, American-Canadian Safety Standard by CSA INTERNATIONAL.
- 2000. 11 Awarded The prize of Export-developing Company by Ministry of Trade and Industry.
- 2003. 11 Awarded Prize of Trade Promotion and Industrial Development from Ministry of Trade and Industry
- 2003. 12 Awarded Prize of excellent Exporter by Jeonnam Province.
- 2004. 11 Opened China office in Dalian named A-Ryung Dalian Co. Ltd.
- 2005. 12 Awarded Honor of machine development by The Prime Minister.
- 2006. 12 Prized 1 Million Tower of Export celebrating National Trade Day
- 2007. 4 Established Research & Development Center
- 2007. 9 Obtained Main-Biz (management innovation in small & midium Co.)
- 2007. 10 Obtained Certificate of Single PPM
- 2007. 10 Obtained Inno-biz (management innivation in small & midium Co.)
- 2008. 5 awarded bronze tower of industry from ministry of public administration and security
- 2009. 2 Obtained NRTL Certificate.
- 2009. 3 A citation from Director of the National Tax Service
- 2010. 11 Motor(more than 0.75kw) based on minum energy efficiency Korean policy will be released in 2011.
- 2012. 2 Export Award of Jeonnam
- 2014. 2 IE3, Premium Efficiency, certified
- 2014. 10 Noble Entrepreneur Award
- 2015. 3 Good Taxpayer Award from the vice prime minister
- 2015. 12 Exporting three million dollars award

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