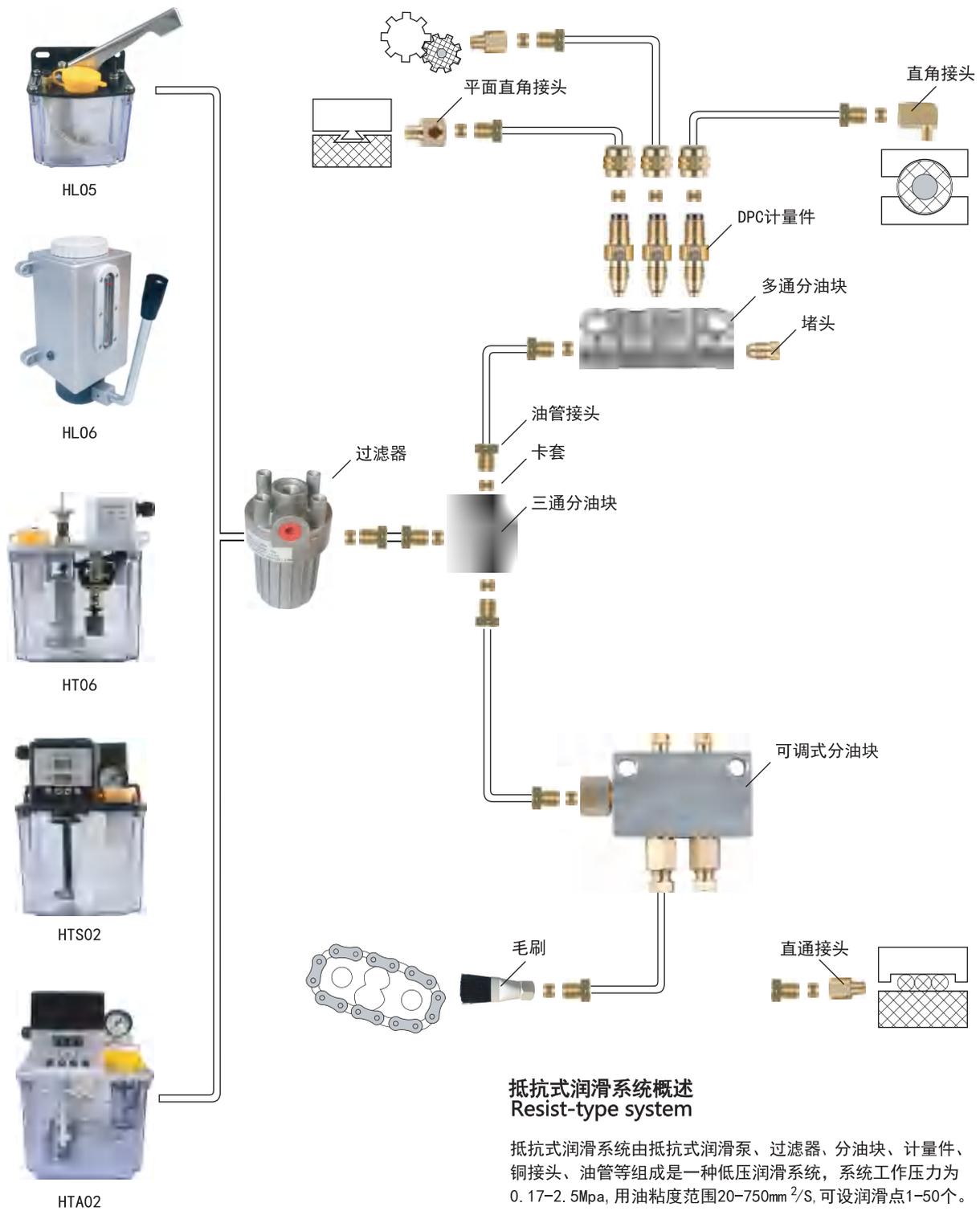


抵抗式（单线阻尼式或节流式）润滑系统示意图

RESIST-TYPE SYSTEM



抵抗式润滑系统概述 Resist-type system

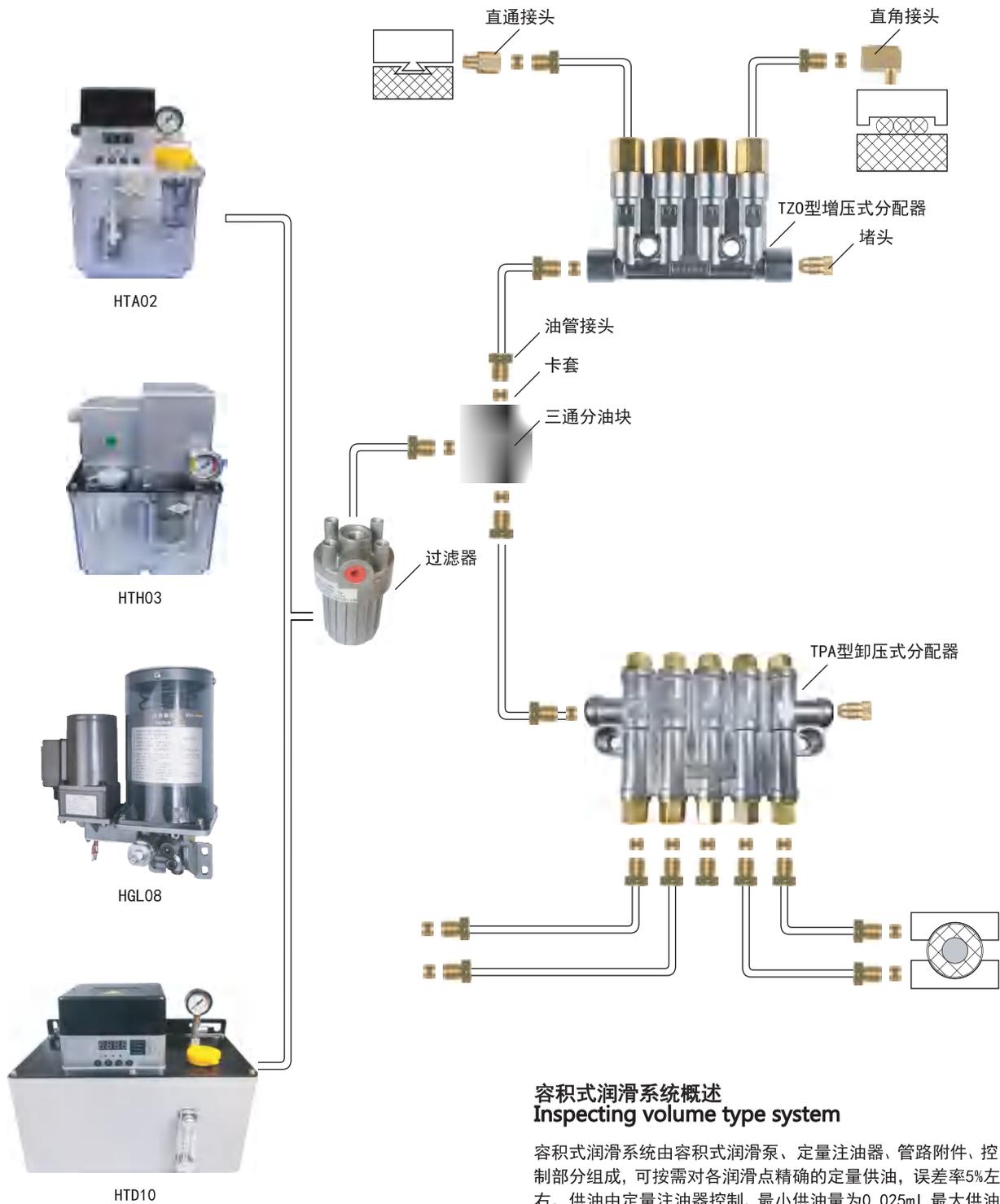
抵抗式润滑系统由抵抗式润滑泵、过滤器、分油块、计量件、铜接头、油管等组成是一种低压润滑系统，系统工作压力为0.17-2.5Mpa，用油粘度范围20-750mm²/S，可设润滑点1-50个。

特点：无需卸压，结构紧凑，增加或减少润滑点较方便；经济、操作维护方便；润滑点供油由计量件或控制件控制，比例供油。

应用：适用于纺织机械、印刷机械、机床、塑料机械等小型机械。

容积式润滑系统示意图

INSPECTING VOLUME TYPE SYSTEM



容积式润滑系统概述

Inspecting volume type system

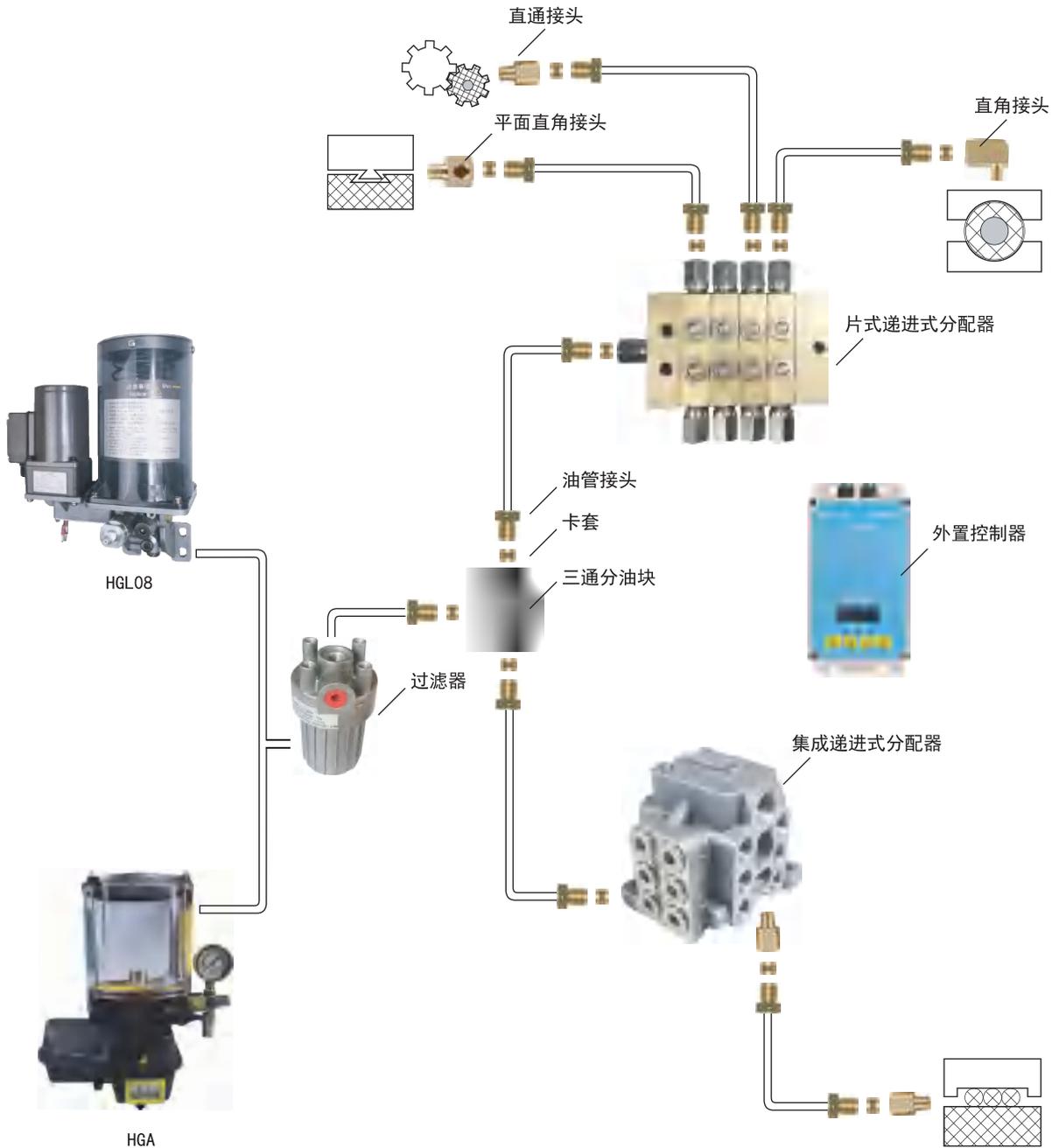
容积式润滑系统由容积式润滑泵、定量注油器、管路附件、控制部分组成，可按需对各润滑点精确的定量供油，误差率5%左右，供油由定量注油器控制，最小供油量为0.025ml，最大供油量为0.5ml，系统压力为1.75-3.5Mpa，用油粘度范围10-2000mm²/S，可设润滑点1-200个。

特点: 增加或减少润滑点较方便；供油量精确；对系统进行压力检测，供油可靠。

应用: 适用于纺织机械、印刷机械、机床、塑料机械、木工机械、农用机械等。

递进式润滑系统示意图

PROGRESSIVE LUBRICATION SYSTEM



递进式润滑系统概述

Progressive lubrication system

递进式润滑系统是一种高压润滑系统,由润滑泵、递进式定量注油器、管路附件、控制部分组成,系统供油时,递进式分配器按一定顺序做差动往复运动,各出油点按顺序一次出油,出油量主要取决于递进式分配器中的活塞行程与活塞截面积。系统配合指示杆和发讯开关报警器,完成对系统的系统监控功能。

特点:具有区域化性能;即独立区域的操作与监控,供油量精确;易于故障检查,更换维修方便。

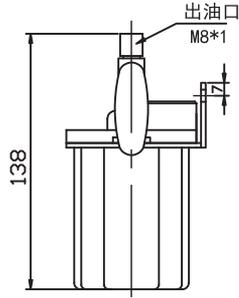
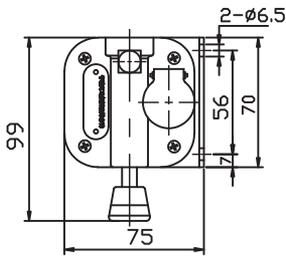
应用:适用于锻压机械、印刷机械、汽车底盘等。

二、稀油润滑泵 LUBRICATION PUMP

1 手动润滑泵 (HL) Manual lubrication pump

(1) 手拉式 Pull type

● 外形与安装尺寸 Outside and installtion dimensions



HL03M 中拉式
HL03M Hit type

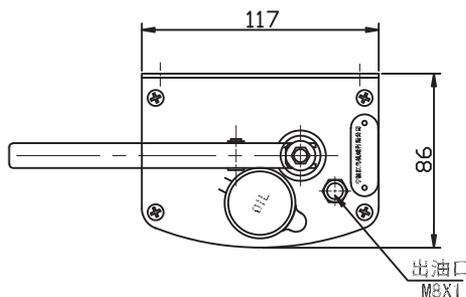
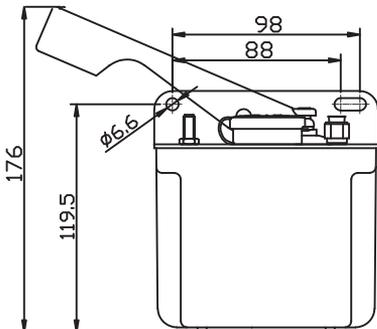
● 规格型号及技术参数 Product specifications

型号 Model	排量(毫升/次) Discharge capacity(ml/cyc)	最大输出压力 Max.discharge pressure(MPa)	油箱容积(升) Tank capacity (L)	出油口螺纹 Discharge bore	出油口数 Number of diacharge	形式 typy	重量 Weight (KG)
HL03L	3.0	0.35	0.18	M8x1(φ4)	1	抵抗式 Resist-type	0.3
HL03M	3.0	0.35	0.18	M8x1(φ4)	1	抵抗式 Resist-type	0.3
HL03R	3.0	0.35	0.18	M8x1(φ4)	1	抵抗式 Resist-type	0.3

只限于抵抗式润滑系统使用
Only for application in resist-type lubrication systems.

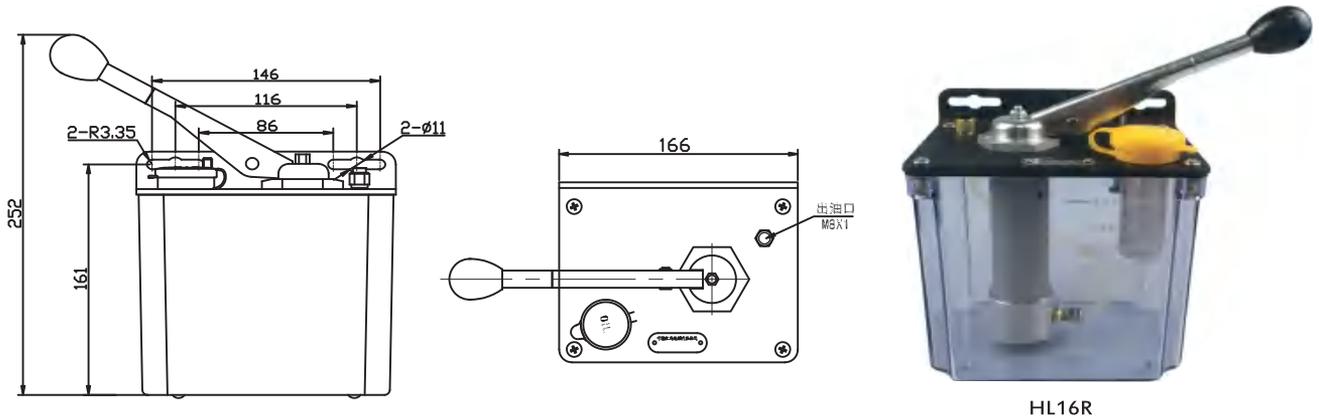
(2) 手压式 Hand pressing type

● 外形与安装尺寸 Outside and installtion dimensions



HL05R 右压式
HL05R Right type

● 外形与安装尺寸
Outside and installtion dimensions



HL16R

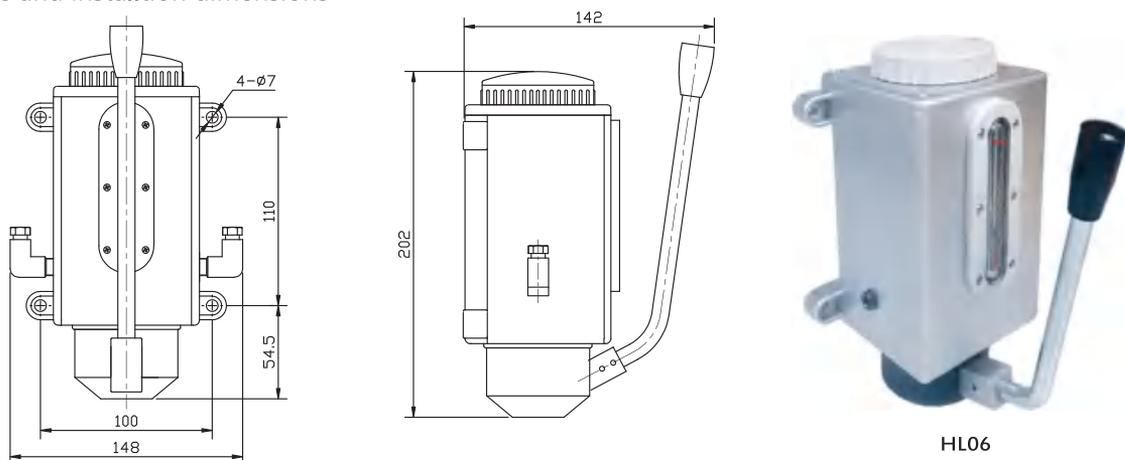
● 规格型号及技术参数
Product specifications

型号 Model	排量(毫升/次) Discharge capacity(ml/cyc)	最大输出压力 Max. discharge pressure(MPa)	油箱容积(升) Tank capacity (L)	出油口螺纹 Discharge bore	出油口数 Number of diacharge	形式 type	重量 Weight (KG)
HL05L	1~5	0.48	0.5	左手	1	抵抗式 Resist-type	0.6
HL05R	1~5	0.48	0.5	右手	1		0.6
HL16L	6~16	0.8	2	左手	1		1.35
HL16R	6~16	0.8	2	右手	1		1.35

只限于抵抗式润滑系统使用
Only for application in resist-type lubrication systems.

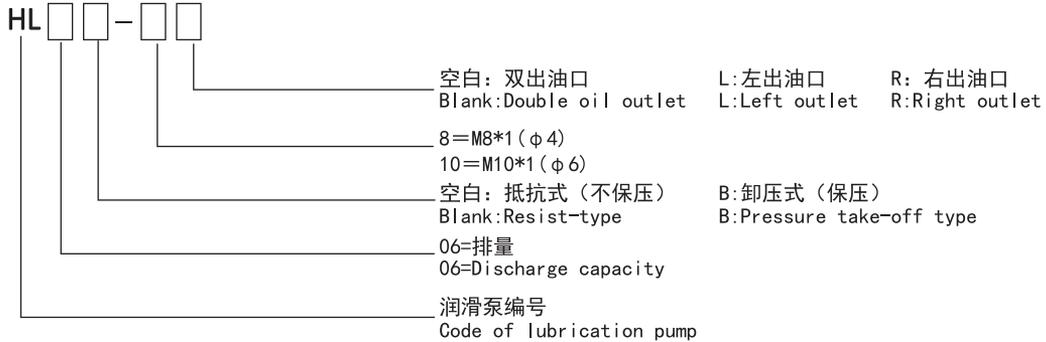
(3) 手摇式
Hand type

● 外形与安装尺寸
Outside and installtion dimensions



HL06

● 型号标记及其说明
Model number and explanations



● 规格型号及技术参数
Product specifications

型号 Model	排量(毫升/次) Discharge capacity(ml/cyc)	最大输出压力 Max. discharge pressure(MPa)	油箱容积(升) Tank capacity (L)	出油口螺纹 Discharge bore	出油口数 Number of discharge	形式 type	重量 Weight (KG)
HL06-8	6.0	2.0	0.6	M8×1(φ4)	双出油口 Double oil outlet	抵抗式/卸压式 Resist-type/ Pressure take-off type	1.37
HL06-10	6.0	2.0	0.6	M10×1(φ6)	双出油口 Double oil outlet		1.37
HL06-8R	6.0	2.0	0.6	M8×1(φ4)	单出油口(右) Left outlet		1.35
HL06-10L	6.0	2.0	0.6	M10×1(φ6)	单出油口(左) Right outlet		1.35

2 电动润滑泵
Motor-driven lubrication pump

(1) 自动间歇式润滑泵 (HT)
Automatic intermittent lubrication pump

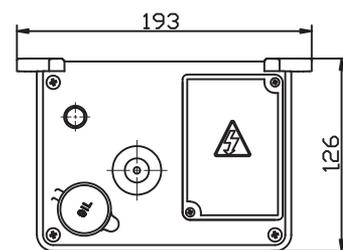
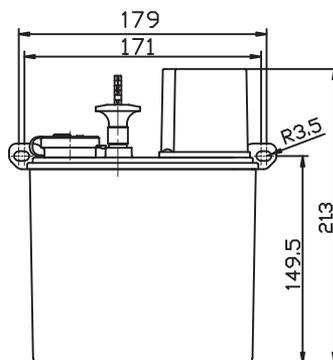
自动间歇式润滑泵是由微型同步电机与涡轮蜗杆减速机构组成, 可实现自动间歇、周期性注油。通过电机的运行带动蜗杆旋转, 经与蜗杆副传动, 通过偏心轮带动摇臂杆使柱塞活动, 完成吸油过程, 在弹簧作用下完成排油动作, 通过计量件按比例将油输送到各润滑点。

Automatic intermittent lubrication pump is composed of micro synchronous motor and worm reducer, can realize the automatic intermittent, periodic oiling. Driven by the operation of the motor driven by the worm rotation, with the worm gear, through the eccentric wheel shake arm which moves the plunger, oil absorption process to complete, in the spring under the action of the finished oil action, through the metering member according to the proportion of the oil is carried to each lubricating point.

● 外形与安装尺寸
Outside and installtion dimensions



HT06



● 规格型号及技术参数

Product specifications

型号 Model	排量(毫升) Discharge capacity(ml)	最大输出压力 Max.discharge pressure(MPa)	油箱容积(升) Tank capacity (L)	间歇时间 Intermittent period (min)	电压 Voltage (V)	功率 Power (W)	形式 type	出油口螺纹 Discharge bore	重量 Weight (KG)
HT06	1-6 (流量可调)	0.45	2	25	220V	2.8W	抵抗式 Resist-type	M8×1(φ4)	1.3
HT06-10	1-6 (Flow can be adjusted)							M10×1(φ6)	1.3

(2) 自动电磁式润滑泵 (HTS)

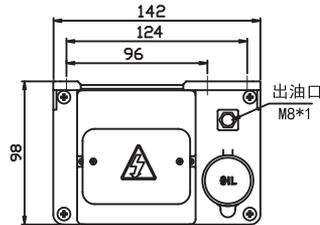
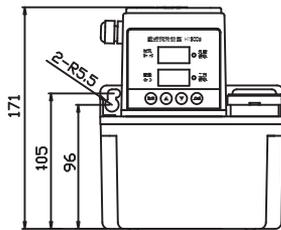
Automatic electromagnetic pump

自动电磁式润滑泵是由电脑芯片控制设定使电磁线圈通电产生的磁力驱动，在磁场内推动活塞副与弹簧配合产生快速循环的柱塞推作，将润滑油不断的推向出油口，由出油口通过分油块、计量件、等连接附件将油输送到各润滑点。

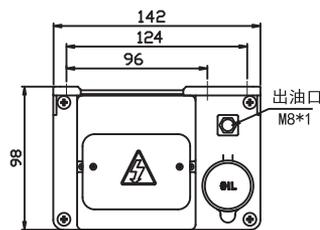
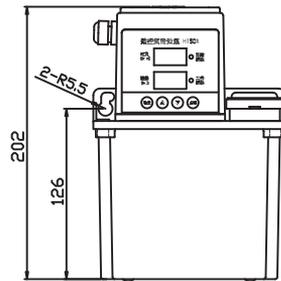
The automatic electromagnetic pump is driven by the magnetic force generated by the electromagnetic coil. In the magnetic field, the piston is driven by the piston pair and the piston is driven by the spring. The push out of the oil outlet, from the oil outlet through the oil, metering, and other connections to the oil transfer to the oil point.

● 外形与安装尺寸

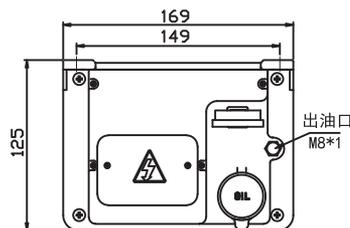
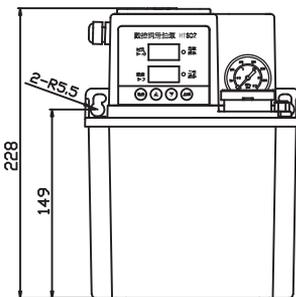
Outside and installation dimensions



HTS05



HTS01



HTS02

(3) 自动齿轮式稀油润滑泵 (HTD) Automatic gear type lubricating pump

自动齿轮式润滑泵是由单相异步电机驱动，通过电机的转动运行带动齿轮泵体主动齿轮旋转，吸油腔脱离啮合，齿轮的轮齿退出齿间，使密封容积增大，形成局部真空，油箱内的润滑油在外界大气压的作用下，经吸油管路、吸油腔进入齿间，随着齿轮转动将吸入齿间的润滑油带到另一侧进入压油腔，这时齿轮进入啮合，使密封性逐渐减小，齿轮间的润滑油被挤出完成润滑油压油过程，通过分油块、计量件等连接附件组成抵抗式润滑系统，通过分油块、定量注油器等连接附件组成容积式润滑系统，将油输送到各润滑点。

Automatic lubricating gear pump is driven by a single-phase asynchronous motor. Through motor running driven active gear to rotate, the oil absorption cavity disengagement, gear teeth exit between the teeth, so that the sealing Volume increases, the formation of a partial vacuum, the oil in the oil tank in the role of the external pressure, the oil suction pipe, oil absorbing chamber into the teeth, with the rotation of the gear will be sucked into the oil belt between the teeth. To the other side into the pressure oil chamber, then the gear into engagement, so that the sealing is gradually reduced, the lubrication oil is squeezed between the gears to complete the lubrication oil process, through the sub block, metering and other connections Accessories resistance type lubrication system, the oil block, quantitative oiling device accessories connected with the volume type lubrication system, to transport crude oil sent to each lubricating point.

● 性能与特点 Performance and features

1. 工作模式——系统可设置四种PLC工作模式，符合抵抗式 (SLR)、容积式 (PDI)、脉冲式 (PULES) 集中润滑系统的要求，可根据机器润滑要求进行设置。
2. 状态指示——面板指示灯可显示润滑泵工作状态、异常状态、停止状态。
3. 控制器保护——PLC控制器具有自保护功能，在异常断电或故障后自动记忆恢复功能。
4. 电机保护——油泵电机可连续运转，单相电机均具有热保护装置，4极电机更稳定。
5. 异常输出——设有液位开关、压力开关 (可选配)，当油量和压力不足时可将异常信号输出并有鸣叫声音提示。
6. 溢流阀——设有溢流阀，可保护润滑泵及管路由于压力过高而损坏。
7. 卸荷阀——在容积式系统中设有脱压装置，可配合定量注油器使用。
8. 排气阀——设有排气阀，在管道内有空气的情况下快速上油。
9. 清洗开关——便于把油污放出，油罐清洗方便。

Work mode-----System can be set up to four kinds of PLC work mode, in accordance with the resistance (SLR), volume (PDI), progressive (SRG), pulse type (PULES) centralized lubrication system requirements, Can be set according to the requirements of machine lubrication.

Status indicator-----The panel indicator can show the working state of the pump, the abnormal state and the stop state.

Controller protection-----The PLC controller has the function of protecting the function of the protection, and the function of the automatic memory restoration after the abnormal power failure or malfunction.

Motor protection-----The oil pump motor can be operated continuously, and the single-phase motor has a thermal protection device.

Exception output-----With liquid level switch, pressure switch (optional), when the oil volume and pressure is insufficient, the abnormal signal output and buzzer sound.

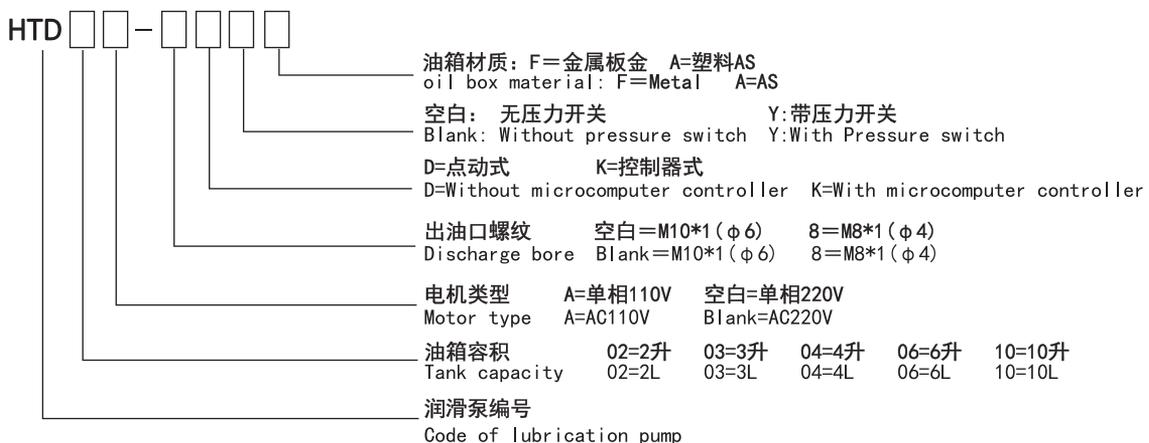
Overflow valve-----With overflow valve, can protect the lubrication pump and pipeline due to high pressure and damage.

Unloading valve-----The volume type system with pressure off device, can be used with quantitative lubricator.

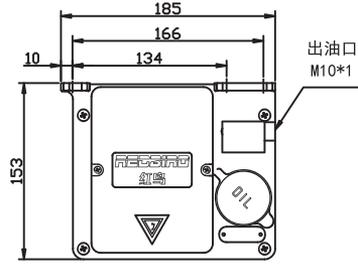
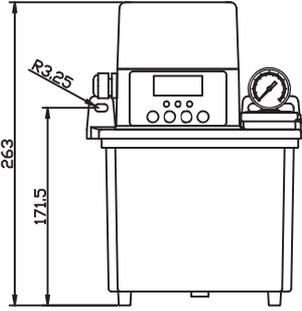
Exhaust valve-----An exhaust valve, quick oil under the condition of air in the pipe.

Cleaning switch-----easy to release the dirty oil, easy to clean the oil tank

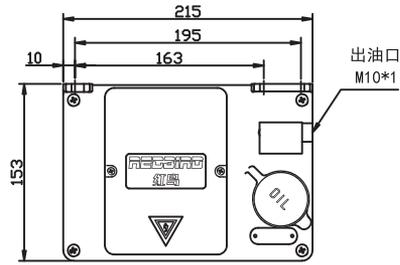
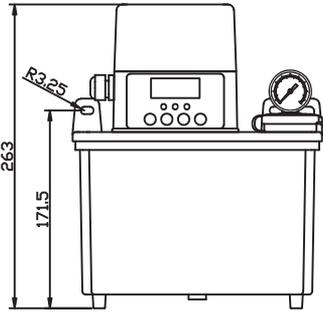
● 型号标记及其说明 Model number and explanations



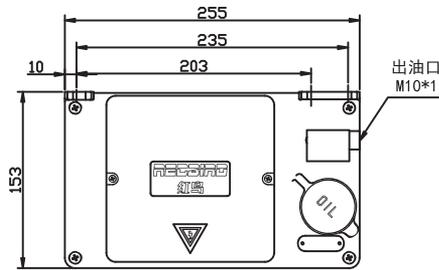
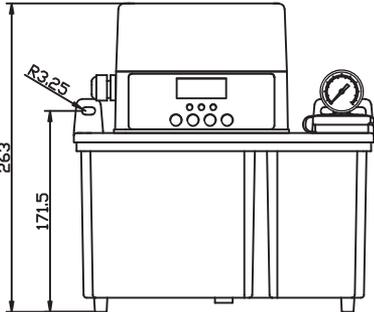
● 外形与安装尺寸
Outside and installation dimensions



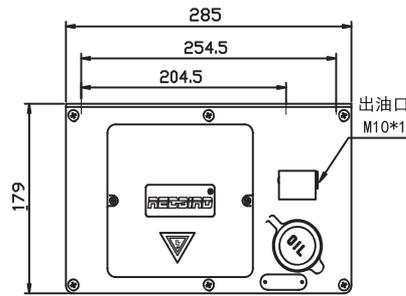
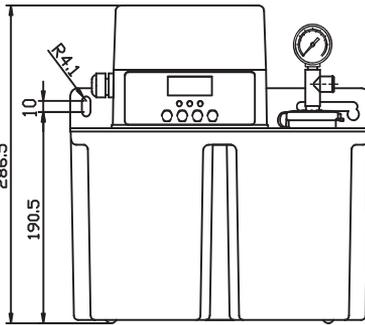
HTD02



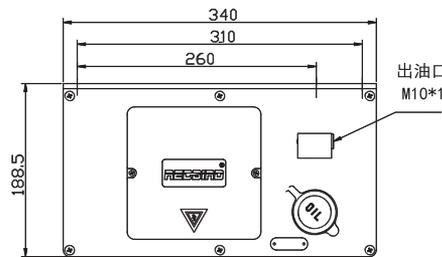
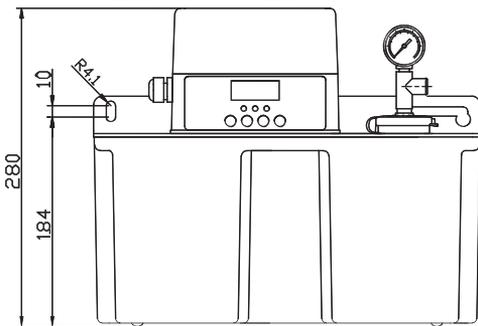
HTD03



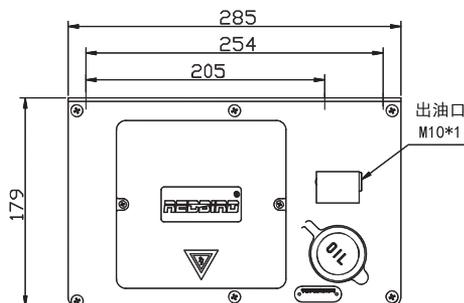
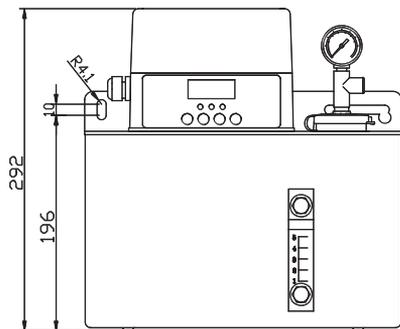
HTD04



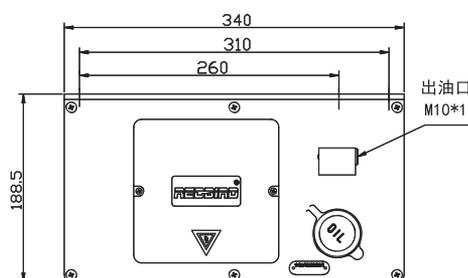
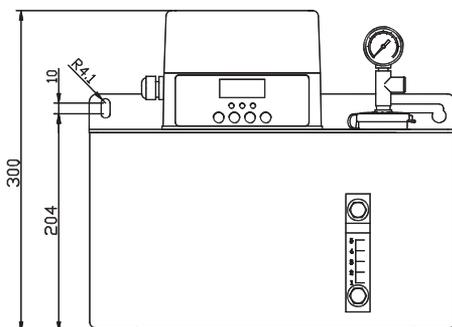
HTD06



HTD10

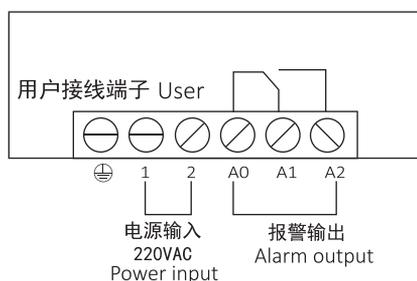


HTD06



HTD10

接线图 Wiring diagram



规格型号及技术参数 Product specifications

型号 Model	油箱容积(升) Tank capacity (L)	电压 Voltage (V)	功率 Power (W)	控制器 microcomputer controller	排量 Discharge capacity(ml/min)	额定压力 Rated pressure (MPa)	最大压力 Max pressure (MPa)	压力开关 pressure switch	蜂鸣器 buzzer	重量 Weight (KG)
HTD02-D	2	220V or 110V	20W or 40W	无 Without	110 or 160 or 450	2.0 or 2.5 or 3.5	5.0	可选配 Can choose to assemble	带控制器款 标配信号异常，声音鸣 叫提示，无控制器的型 号可选配蜂 鸣器 The model with controller is equipped with a buzzer, and the model can choose whether or not to assemble a buzzer.	2.2
HTD02-K				有 With						
HTD03-D	3			无 Without						
HTD03-K				有 With						
HTD04-D	4			无 Without						
HTD04-K				有 With						
HTD06-D	6			无 Without						
HTD06-K				有 With						
HTD10-D	10			无 Without						
HTD10-K				有 With						

出油口螺纹 M10*1(φ6) 额定转速 1350r/min
Discharge bore Rated rotary speed

(4) 自动齿轮式稀油润滑泵 (HTA)

Automatic gear type lubricating pump

自动齿轮式润滑泵是由单相异步电机驱动，通过电机的转动运行带动齿轮泵体主动齿轮旋转，吸油腔脱离啮合，齿轮的轮齿退出齿间，使密封容积增大，形成局部真空，油箱内的润滑油在外界大气压的作用下，经吸油管路、吸油腔进入齿间，随着齿轮转动将吸入齿间的润滑油带到另一侧进入压油腔，这时齿轮进入啮合，使密封性逐渐减小，齿轮间的润滑油被挤出完成润滑油压油过程，通过分油块、计量件等连接附件组成抵抗式润滑系统，通过分油块、定量注油器等连接附件组成容积式润滑系统，将油输送到各润滑点。

Automatic lubricating gear pump is driven by a single-phase asynchronous motor. Through motor running driven active gear to rotate, the oil absorption cavity disengagement, gear teeth exit between the teeth, so that the sealing Volume increases, the formation of a partial vacuum, the oil in the oil tank in the role of the external pressure, the oil suction pipe, oil absorbing chamber into the teeth, with the rotation of the gear will be sucked into the oil belt between the teeth. To the other side into the pressure oil chamber, then the gear into engagement, so that the sealing is gradually reduced, the lubrication oil is squeezed between the gears to complete the lubrication oil process, through the sub block, metering and other connections Accessories resistance type lubrication system, the oil block, quantitative oiling device accessories connected with the volume type lubrication system, to transport crude oil sent to each lubricating point.

性能与特点

● Performance and features

1. 工作模式——系统可设置四种PLC工作模式，符合抵抗式 (SLR)、容积式 (PDI)、递进式 (SRG)、脉冲式 (PULES) 集中润滑系统的要求，可根据机器润滑要求进行设置。
2. 状态指示——面板指示灯可显示润滑泵工作状态、异常状态、停止状态。
3. 控制器保护——PLC控制器具有自保护功能，在异常断电或故障后自动记忆恢复功能。
4. 异常输出——设有液位开关、压力开关 (可选配)，当油量和压力不足时可将异常信号输出并有鸣叫声音提示。
5. 溢流阀——设有溢流阀，可保护润滑泵及管路由于压力过高而损坏。
6. 卸荷阀——在容积式系统中设有脱压装置，可配合定量注油器使用。
7. 排气阀——设有排气阀，在管道内有空气的情况下快速上油。

Work mode----- System can be set up to four kinds of PLC work mode, in accordance with the resistance (SLR), volume (PDI), progressive (SRG), pulse type (PULES) centralized lubrication system requirements, Can be set according to the requirements of machine lubrication.

Status indicator----- The panel indicator can show the working state of the pump, the abnormal state and the stop state.

Controller protection--- The PLC controller has the function of protecting the function of the protection, and the function of the automatic memory restoration after the abnormal power failure or malfunction.

Exception output----- With liquid level switch, pressure switch (optional), when the oil volume and pressure is insufficient, the abnormal signal output and buzzer sound.

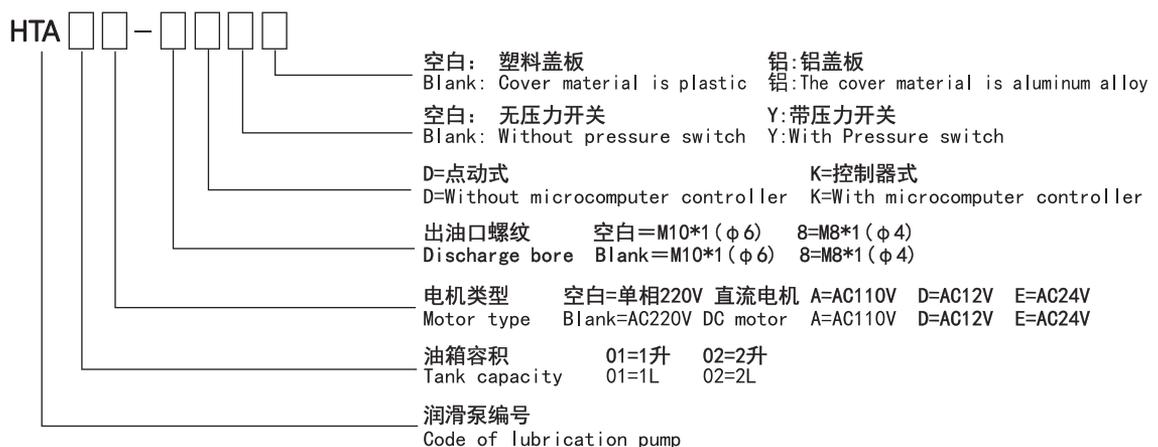
Overflow valve----- With overflow valve, can protect the lubrication pump and pipeline due to high pressure and damage.

Unloading valve----- The volume type system with pressure off device, can be used with quantitative lubricator.

Exhaust valve----- An exhaust valve, quick oil under the condition of air in the pipe.

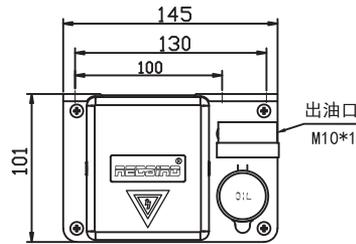
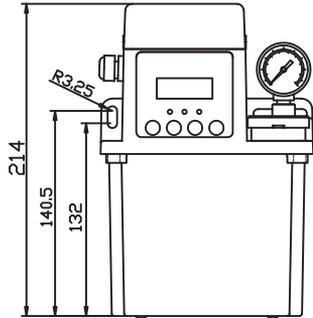
● 型号标记及其说明

Model number and explanations

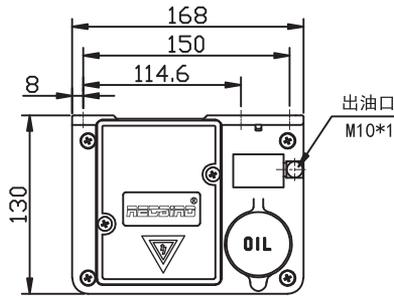
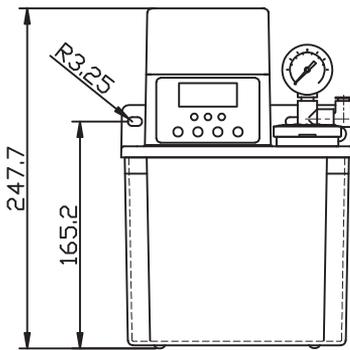


额定转速 2900r/min
Rated rotary speed

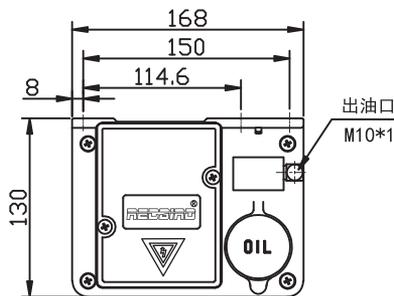
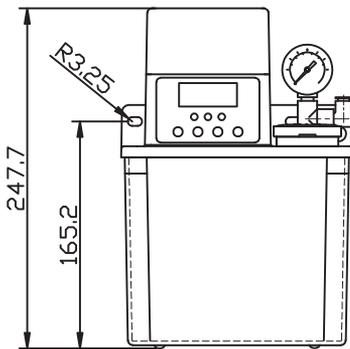
● 外形与安装尺寸
Outside and installation dimensions



HTA01



HTA02



HTA02

● 规格型号及技术参数
Product specifications

型号 Model	油箱容积(升) Tank capacity (L)	电压 Voltage (V)	功率 Power (W)	控制器 microcomputer controller	排量 Discharge capacity(ml/min)	额定压力 Reted pressure (MPa)	最大压力 Max pressure (MPa)	压力开关 pressure switch	蜂鸣器 buzzer
HTA01-D	1	220V 110V	60W	无 Without	150 or 200	2.0 or 2.5	5.0	可选配 Can choose to assemble	带控制器款标配信号 异常，声音鸣叫提示， 无控制器的型号可选 配蜂鸣器 The model with controller is equipped with a buzzer, and the model can choose whether or not to assemble a buzzer.
HTA01-K				有 With					
HTA02-D	2	12V 24V	60W	无 Without	200 or 320	2.0 or 2.5	5.0	可选配 Can choose to assemble	
HTA02-K				有 With					

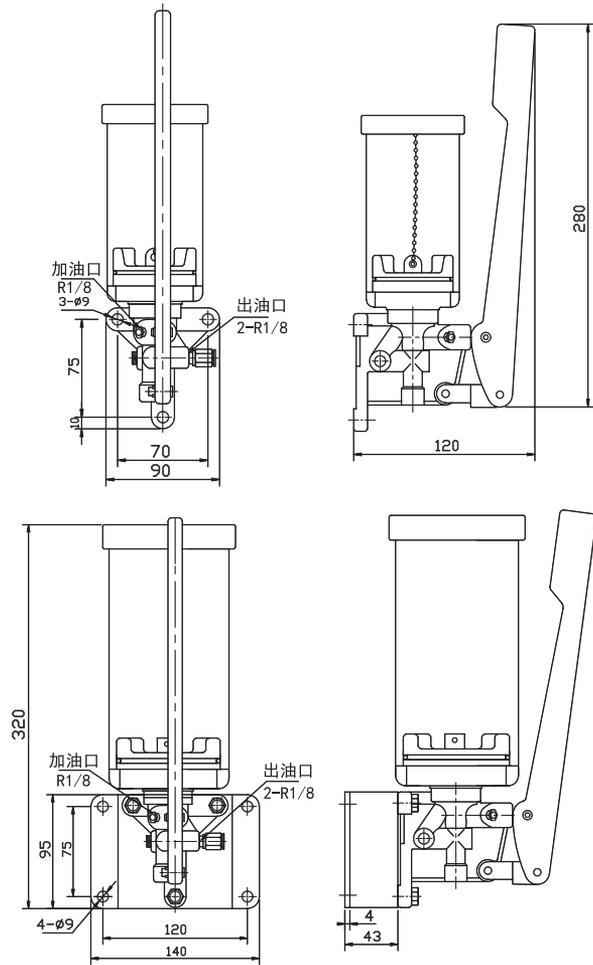
三、油脂润滑泵 LUBRICATION PUMP

1 手动油脂润滑泵 (HG) Manual lubrication pump

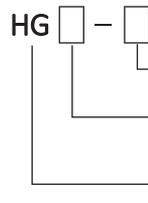
HG型手动油脂泵是一种柱塞式润滑泵, 可以直接向润滑点注油脂, 也可通过阻尼式分配器, 容积式定量注油器和递进式分配器将润滑脂按比例或定量的分配到各个润滑点, 适用于机床. 纺机. 木工机械等中小型机械.

HG type manual grease pump is a kind of plunger type lubricating pump, which can inject grease directly to the lubricating points, or distribute the grease to each lubricating point in proportion or in quantity through damping distributor, volume type quantitative oiler and progressive distributor. It is suitable for medium and small machines such as machine tools, spinning machines, woodworking machines, etc

● 外形与安装尺寸 Outside and installtion dimensions



● 型号标记及其说明 Model number and explanations



空白: 无卸荷阀
Blank: No unloading valve
Y: 有卸荷阀
Y: With unloading valve

油箱容积 04=0.4升 10=1升
Tank capacity 04=0.4L 10=1L

润滑泵编号
Code of lubrication pump

● 规格型号及技术参数 Product specifications

型号 Model	油箱容积 (升) Tank capacity (L)	最大压力 Max pressure (MPa)	排量 Discharge capacity (ml/min)	卸荷阀 Unloading valve	适用系统 Applicable system	用脂范围 (NLGI)
HG	0.4 or 1	15	1	可选配 Can choose to assemble	PDI,SLR,PRG	000#--0#

2 电动油脂润滑泵

Electric butter lubrication pump

(1) 电动油脂润滑泵 (HTH)

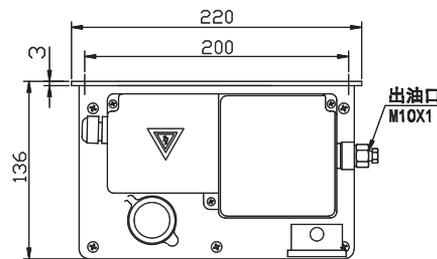
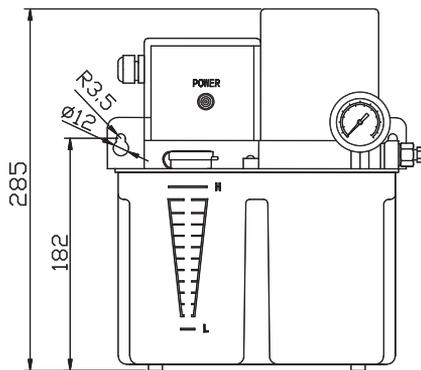
Electric butter lubrication pump

此款电动油脂润滑泵是通过电机的转动运行带动齿轮泵体主动齿轮旋转，吸油腔脱离开啮合，齿轮的轮齿退出齿间，使密封容积增大，形成局部真空，油箱内的油脂在外界大气压的作用下，经吸油管路、吸油腔进入齿间，随着齿轮转动将吸入齿间的油脂带到另一侧进入压油腔，这时齿轮进入啮合，使密封性逐渐减小，齿轮间的油脂被挤出完成压油过程，通过分油块、定量注油器等连接附件组成容积式润滑系统，将油输送到各润滑点。

This electric grease lubrication pump drives the driving gear of the gear pump body to rotate through the rotating operation of the motor, the oil suction cavity is disengaged and meshed, the gear teeth exit from the teeth, so that the sealing volume increases, forming a local vacuum. Under the action of the external atmospheric pressure, the grease in the oil tank enters the teeth through the oil suction pipeline and the oil suction cavity, and the grease between the suction teeth is brought to the other side along with the rotation of the gear. When the gear enters into the pressure oil cavity, the gear will enter into the meshing, so that the sealing will be gradually reduced, and the grease between the gears will be extruded to complete the pressure oil process. A positive displacement lubrication system will be formed by connecting accessories such as oil blocks, quantitative oilers, etc., and the oil will be delivered to each lubrication point.

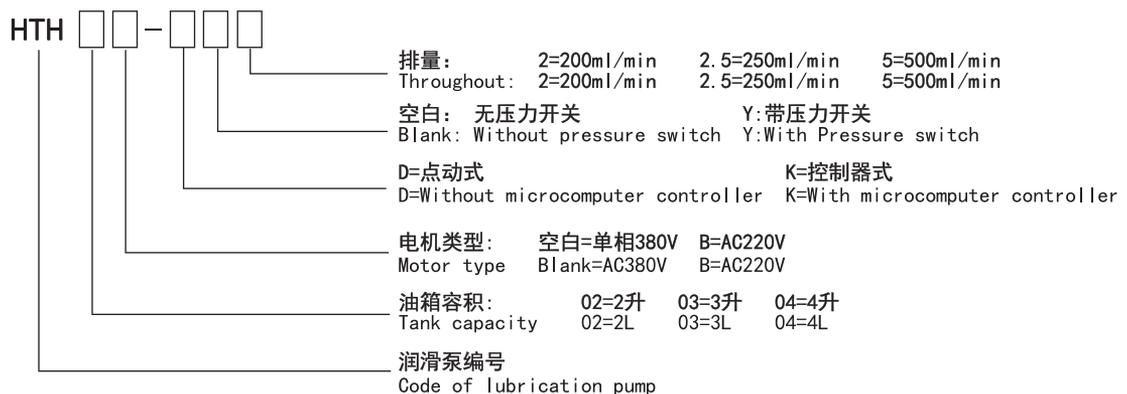
● 外形与安装尺寸

Outside and installtion dimensions



● 型号标记及其说明

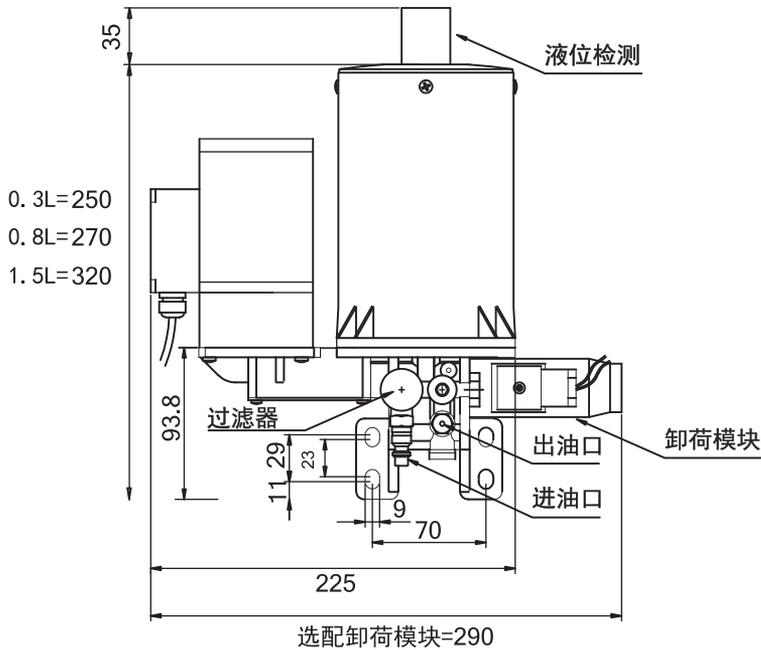
Model number and explanations



额定压力:2Mpa
Rated pressure:2Mpa

(2) 电动油脂润滑泵 (HGL)
Electric butter lubrication pump

● 外形与安装尺寸
Outside and installation dimensions



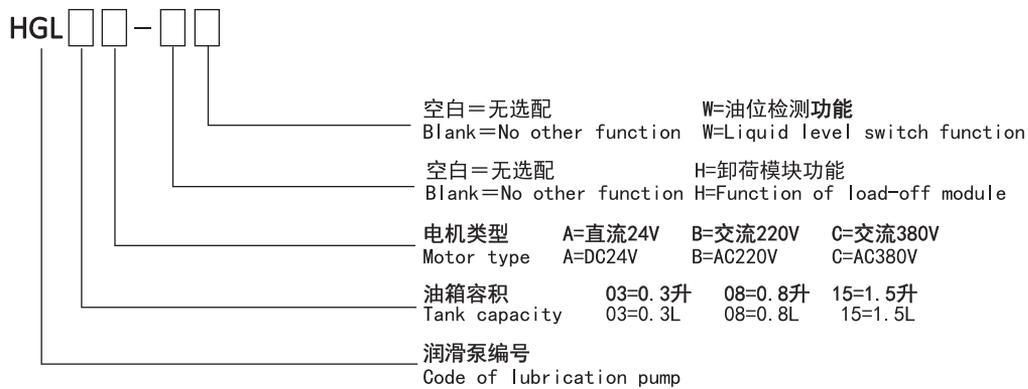
● 性能与特点
Performance and features

- 由主机PLC或外置HG-AC控制器控制润滑泵工作周期、运行时间、间歇时间。
- 加油口设有过滤装置，加油过程减少杂质、空气混入润滑系统，确保润滑系统更安全可靠。
- 设有调压阀，控制润滑泵的工作压力，保护润滑系统工作安全。
- 可选配液位报警系统。
- 采用压油块，真空吸油。
- 配合分配器：U型、TPG、TZG。
- 配合油脂：000#—1#锂基脂。
- The lubrication pump's working cycle, running time and intermittent time are controlled by the host PLC or external HG-AC controller.
- The lubricating port is equipped with filter device to reduce impurities and air in the lubricating system during the lubricating process, ensuring the lubrication system is more safe and reliable.
- Equipped with pressure regulating valve, control lubrication pump working pressure and protect the security of the lubrication system work.
- Liquid level alarm system is optional.
- Using oil pressure block, vacuum oil absorption.
- Matching distributor: U, TPG, TZG.
- Compound fat: 000#~1# lithium base fat.

● 规格型号及技术参数
Product specifications

型号 Model	油箱容积(升) Tank capacity (L)	电压 Voltage (V)	功率 Power (W)	排量 Discharge capacity(ml/min)	额定压力 Rated pressure (MPa)	卸荷模块 load-off module	油位检测 Liquid level switch	重量 Weight (KG)
HGL03	0.3	DC24 AC220 AC380	25W	20	8	可选配 Can choose to assemble	可选配 Can choose to assemble	3.2
HGL08	0.8							3.5
HGL15	1.5							3.8

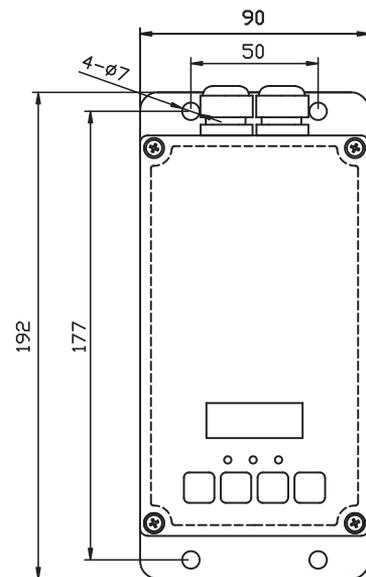
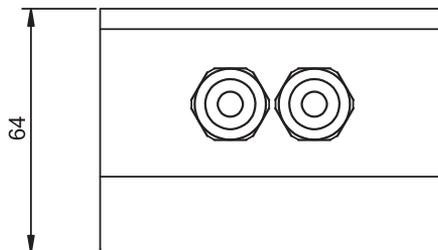
● 型号标记及其说明
Model number and explanations



外置控制器 (HG-AC)
External Controller

外置式控制器采用单片机控制, 结构简单, 可靠性强, 方便拆卸, 便于配合各类润滑系统, 实现周期自动控制。
External controller adopts single chip microcomputer control, simple structure, strong reliability, convenient disassembly, easy to cooperate with various lubrication systems, to achieve automatic cycle control.

● 外形与安装尺寸
Outside and installtion dimensions



● 规格型号及技术参数
Product specifications

型号 Model	输入电压 Input Voltage (V)	输出电压 output Voltage (V)	功率 Power (W)	工作时长 working time (second/frequency)	间歇时间 Interval time (min)	控制方式 control mode	报警方式 Alarm mode	重量 Weight (KG)
HG-DC4	DC24	DC24	≤150W	1~999	1~9999	时间 压力开关 循环开关 频率	蜂鸣器 面板显示 继电器触点	0.5
HG-AC2	AC220	AC220						0.5
HG-AC8	AC380	AC380						0.8

(3) 电动油脂润滑泵 (HGA, HGB)

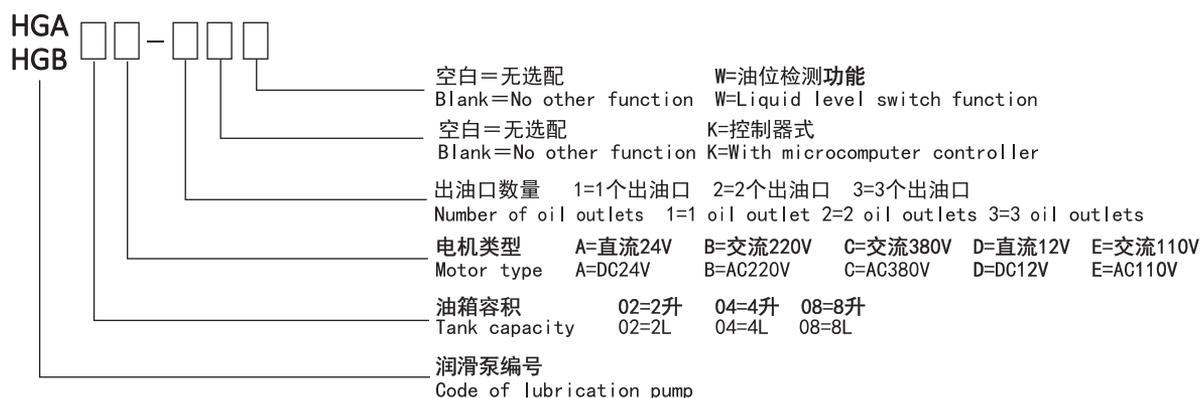
Electric butter lubrication pump

HGA, HGB型电动柱塞泵结构合理, 功能齐全, 输出压力高, 可同时有三个出油口, 与递进式分配器等相关附件组成递进式润滑系统, 适用于对润滑要求较高的各类机械设备润滑, 该系列泵采用密封装置, 具有防尘, 防雨功能, 广泛运用于工程机械, 自动生产线, 纺机, 包装机械等机械设备中。

HGA and HGB electric plunger pumps have reasonable structure, complete functions and high output pressure. They can have three oil outlets at the same time. They form a progressive lubrication system with progressive distributors and other related accessories. They are suitable for lubrication of all kinds of mechanical equipment with high lubrication requirements. This series of pumps are sealed with dust-proof and rainproof functions and are widely used in engineering machinery, automatic production lines, spinning machines, Packaging machinery and other mechanical equipment.

● 型号标记及其说明

Model number and explanations



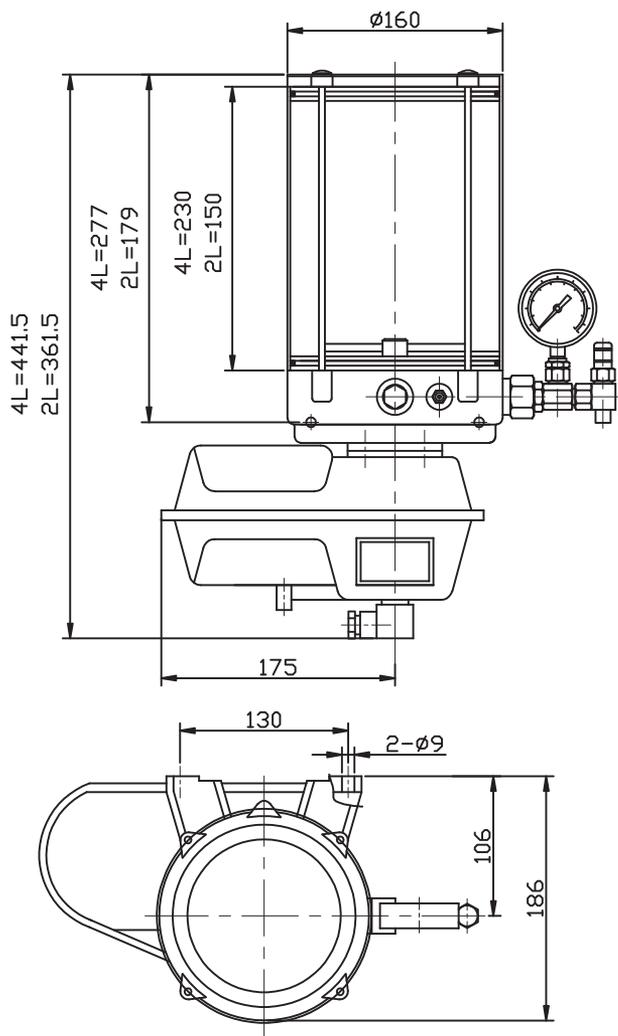
● 规格型号及技术参数
Product specifications

型号 Model	油箱容积(升) Tank capacity (L)	电压 Voltage (V)	功率 Power (W)	出油口数 Number of oil outlets	排量 Discharge capacity(ml/min)	最大工作压力 Reted pressure (MPa)	控制器/油位检测 controller/Liquid level switch	重量 Weight (KG)
HGA02	2	DC12 DC24 AC110 AC220	50W	1~3	5.5	25	可选配 Can choose to assemble	4.4
HGA04	4							4.8
HGB02	2	AC110 AC220 AC380	60W		3			10.6
HGB04	4							11
HGB08	8							12

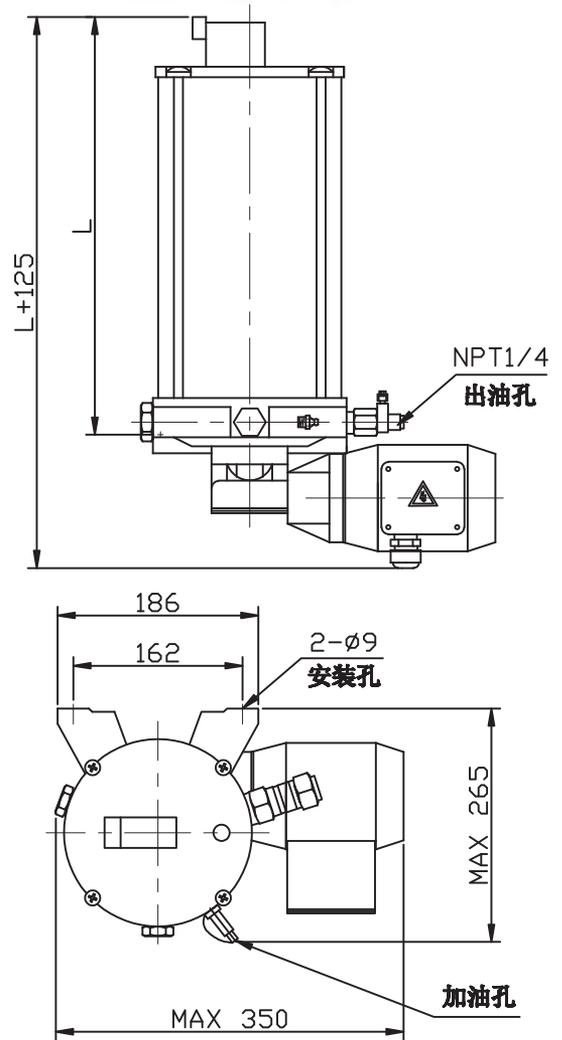
注: 出油口螺纹M12x1.5及Rp1/4选择

- 外形与安装尺寸
Outside and installation dimensions

HGA型



HGB型



四、分配器 DISTRIBUTOR

1 抵抗式分配器

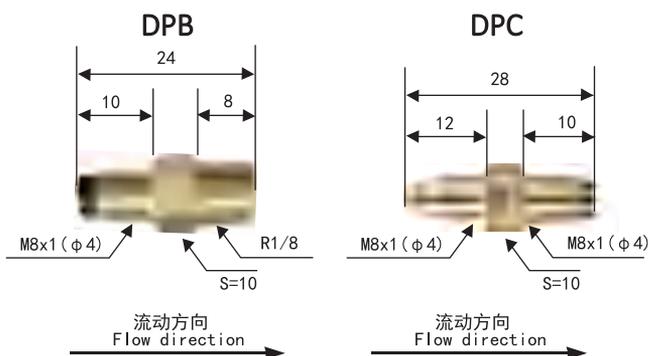
Resist-type proportion distributor

(1) 抵抗式比例计量件

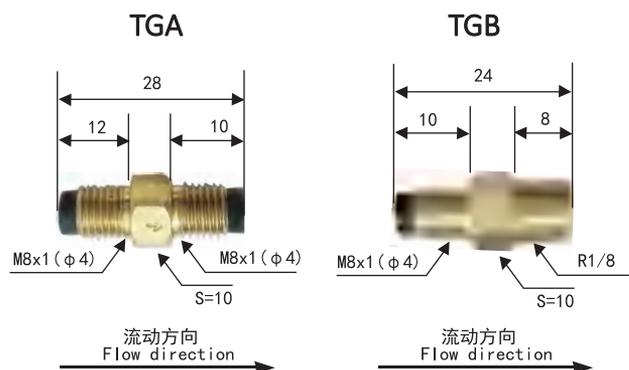
Resist-type proportion distributor

● 外形与安装尺寸

Outside and installation dimensions



型式 Model	DPC			DPB	
规格 Standard	1	2	3	4	5
流率 Flow rate	1	2	4	8	16
接头口径 Connector diameter	IN:M8X1 OUT:M8X1		IN:M8X1 OUT:R1/8		
使用压力 Pressure used	0.15~2Mpa				
使用油粘度 Viscosity of oil used	20~50cst(稀油)				



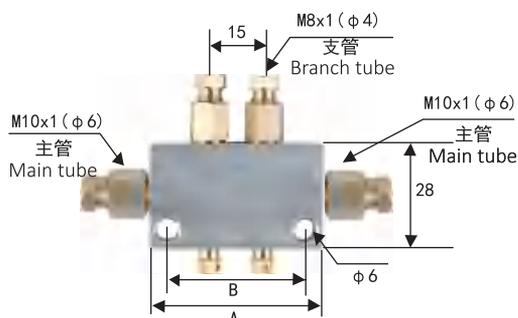
型式 Model	TGA			TGB	
规格 Standard	1	2	3	4	5
流率 Flow rate	1	2	4	8	16
接头口径 Connector diameter	IN:M8X1 OUT:M8X1		IN:M8X1 OUT:R1/8		
使用压力 Pressure used	0.15~10Mpa				
使用油粘度 Viscosity of oil used	20~500cst 油脂Grease 00#~000#				

(2) 抵抗式可调比例分配器

Resist-type proportion distributor

● 外形与安装尺寸

Outside and installation dimensions



注：如主管与支管均为M8x1时，型号后面加“8”，如：TK2-88
如主管一端为M10x1时，型号后面加“10”，如：TK2-810

Note: If main tubes are all M8x1, "8" is added to the code, e.g. TK2-8-8;
If one end of the main tube is M10x1, "10" is added to the code, e.g. TK2-8-10.

● 规格型号及技术参数

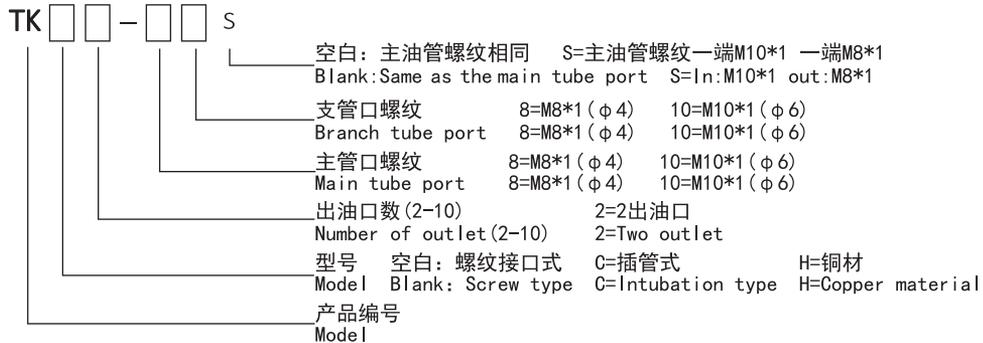
Product specifications

型号 Model	出油口数 Number of discharge	主管口螺纹 Main tube port	支管口螺纹 Branch tube port	A	B
TK2-108	2	M10x1 (φ6)	M8x1 (φ4)	47	37
TK3-108	3			62	52
TK4-108	4			77	67
TK5-108	5			92	82
TK6-108	6			107	97
TK7-108	7			122	112
TK8-108	8			137	127
TK9-108	9			152	142
TK10-108	10			167	157

上表主管均为M10X1时 Above chart supposes main tubes are all M10x1

● 型号标记及其说明

Model number and explanations



(3) 容积式分配器

Volume type distributor

1) TPA型定量分配器

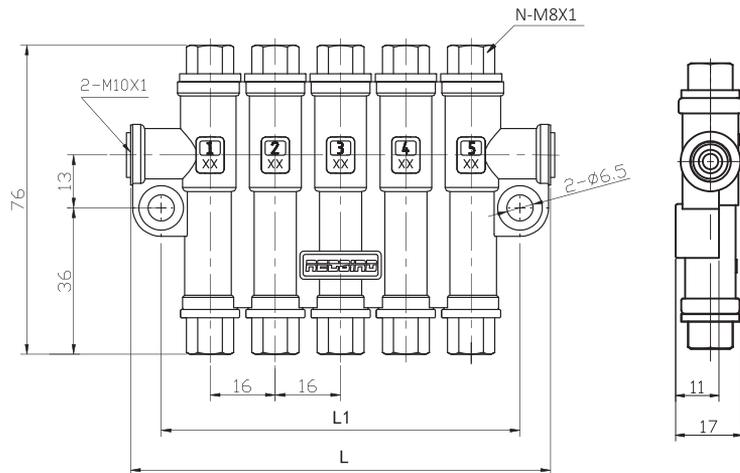
TPA volume type distributor

TPA型定量分配器是卸压式定量注油器，主要工作原理为系统加压时储油，系统卸压时注油，适用于工作压力在1.7-2.5Mpa的容积式周期润滑系统中，该产品能将润滑油按选定的注油量规格定量的输送给各润滑点，出油口有1-5口可选，每个出油口的注油量可在规定范围内任意选择，该产品广泛应用于供油精准的中小型机械设备中。

TPA type quantitative distributor is unloading type quantitative oiling device, the main working principle for the system when the oil pressure relief system, oiling, suitable for working pressure in the lubrication system of 1.7-2.5Mpa volumetric cycle, the product can make lubricating oil according to the specifications of the selected quantitative oil delivered to each lubricating point, out of port 1-5 optional ports, each port of the fuel oil within the prescribed scope of arbitrary choice, the products are widely used in small and medium-sized machinery equipment supply of precision.

● 外形与安装尺寸

Outside and installation dimensions

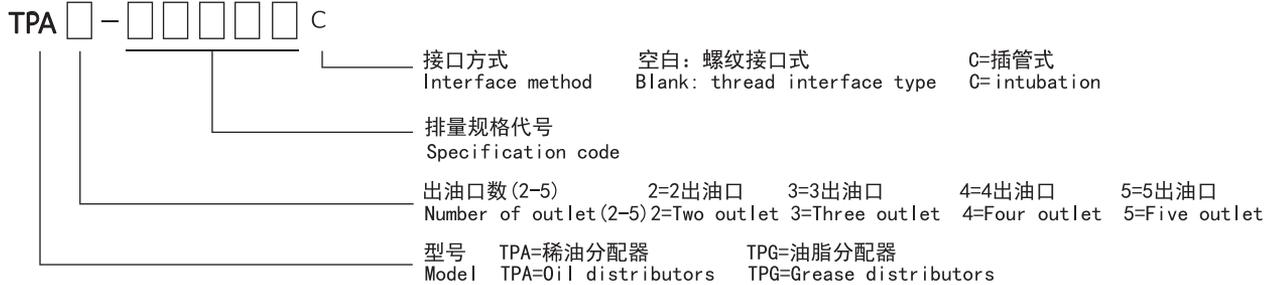


● 规格型号及技术参数

Product specifications

型号 Model	TPA / TPG									
出油口数 Number of outlets	2		3			4			5	
L1	40		56			72			88	
L	54		70			86			102	
常用排量 (ml/cyc) Common discharge capacity	0.03	0.06	0.1	0.16	0.2	0.3	0.4	0.5		
作动保证压力 (Mpa) Action guarantee pressure	稀油Oil 0.8~1.4Mpa					油脂Grease 2~5Mpa				
使用油粘度 Recommended viscosity	20~500cst, 油脂Grease 00#.000#									

● 型号标记及其说明
Model number and explanations



排量规格代号 Specification code	03	06	10	16	20	30	40	50	0
排量 (ml/cyc) Discharge capacity	0.03	0.06	0.1	0.16	0.2	0.3	0.4	0.5	0(即被堵上Plug)

注: 1、排量表示方式: 当出油口排量一样时, 只用一个排量表示;
例: TPA5-10表示TPO型5口分配器1、2、3、4、5出油口排量均为0.1毫升/次; TPA5-0306102030表示TPA型5口分配器1、2、3、4、5出油口排量分别为0.03、0.06、0.1、0.2、0.3毫升/次;
2、其中7、8、9、10口分配器为5口与2、3、4、5口组合, 6口分配器为3口与3口的组合。

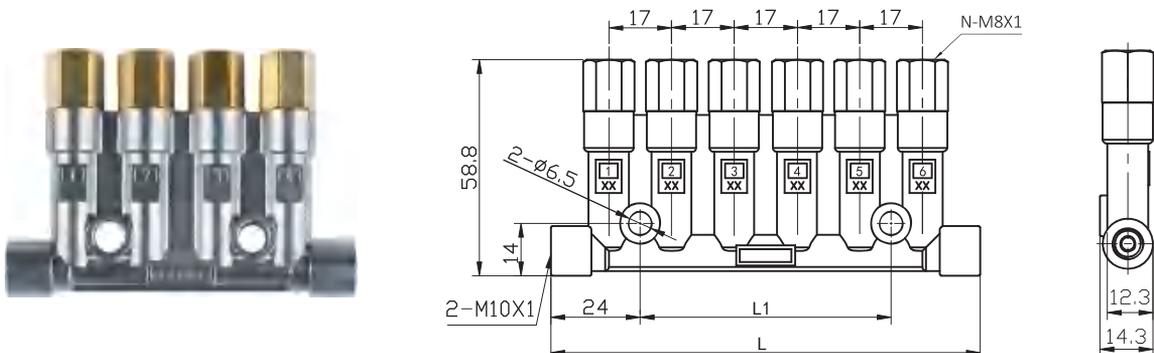
Note: the displacement means; when the output of the oil displacement is the same, only a displacement said; Example: TPA5-10 indicates that it is an type distributor with five outlets and all outlets have the same capacity of 0.1ml/time.

2) TZ0型定量分配器
TZ0 volume type distributor

TZ0型定量分配器是增压式定量注油器, 主要工作原理为系统加压时注油, 系统卸压时储油, 适用于工作压力在1.7-2.5Mpa的容积式周期润滑系统中, 该产品能将润滑油按选定的注油量规格定量的输送给各润滑点, 出油口有2-6口可选, 每个出油口的注油量可在规定范围内任意选择, 该产品广泛应用于供油精准的中小型机械设备中。

TPO type quantitative distributor is unloading type quantitative oiling device, the main working principle for the system when the oil pressure relief system, oiling, suitable for working pressure in the lubrication system of 1.7-2.5Mpa volumetric cycle, the product can make lubricating oil according to the specifications of the selected quantitative oil delivered to each lubricating point, out of port 1-5 optional ports, each port of the fuel oil within the prescribed scope of arbitrary choice, the products are widely used in small and medium-sized machinery equipment supply of precision.

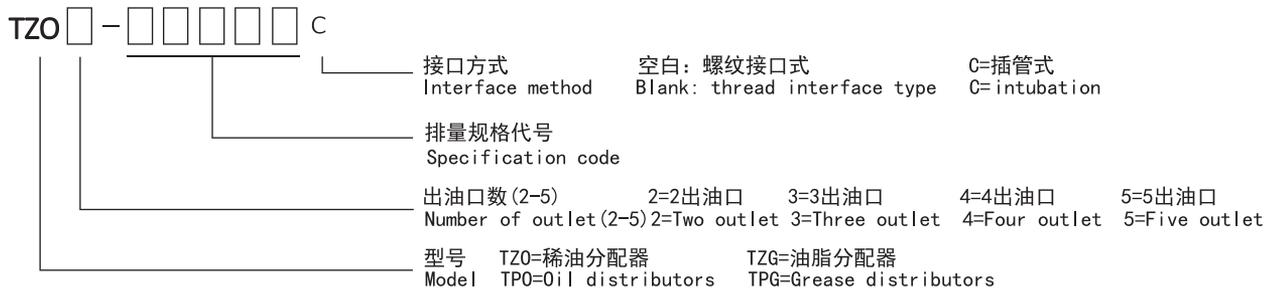
● 外形与安装尺寸
Outside and installtion dimensions



● 规格型号及技术参数
Product specifications

型号 Model	TZO / TZG				
出油口数 Number of outlets	2	3	4	5	6
L1	0	17	34	51	68
L	48	65	82	99	116
常用排量 (ml/cyc) Common discharge capacity	0.03 0.06 0.1 0.16 0.2 0.3 0.4 0.5				
作动保证压力 (Mpa) Action guarantee pressure	稀油Oil 0.8~1.4Mpa 油脂Grease 2~5Mpa				
使用油粘度 Recommended viscosity	20~500cst, 油脂Grease 00#.000#				

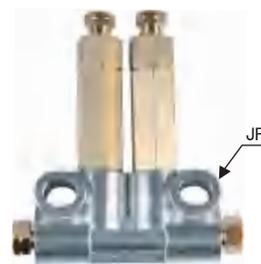
● 型号标记及其说明
Model number and explanations



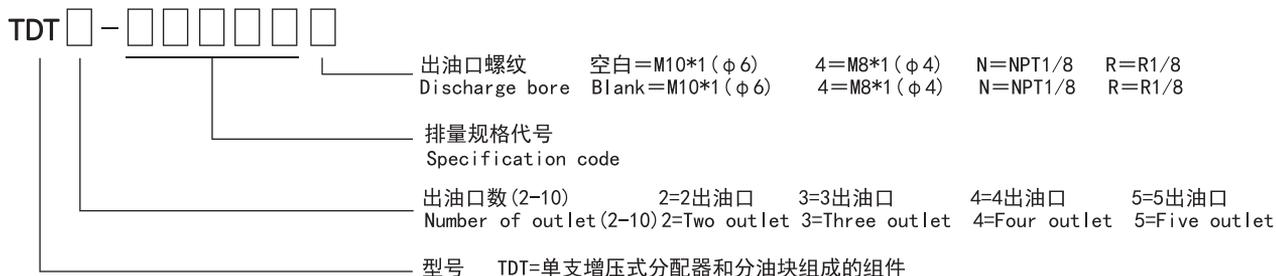
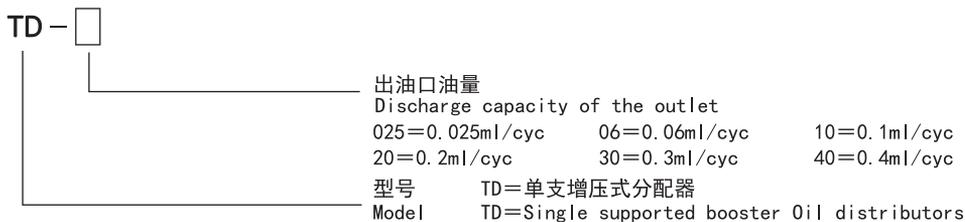
排量规格代号 Specification code	03	06	10	16	20	30	40	50	0
排量 (ml/cyc) Discharge capacity	0.03	0.06	0.1	0.16	0.2	0.3	0.4	0.5	0 (即被堵上Plug)

3) 增压式单支定量分配器
Single supported booster Oil distributors

● 外形与安装尺寸
Outside and installtion dimensions



● 型号标记及其说明
Model number and explanations



● 规格型号及技术参数
Product specifications

型号 Model	排量 Discharge capacity(L/min)	L	S	A	B
TD-025	0.025	52	12	M8X1	NPT1/8 or M8*1 or M10*1 or R1/8
TD-06	0.06				
TD-10	0.1				
TD-20	0.2				
TD-30	0.3	62			
TD-40	0.4				

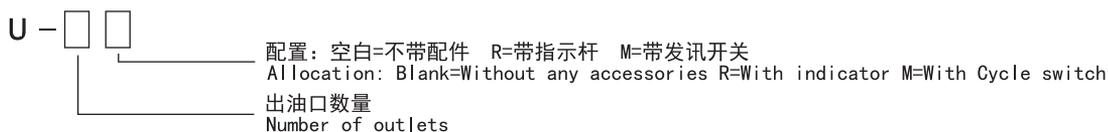
需要其他流量或接口螺纹可定制
Need other flow or Joint spec can be customized

(4) 集成U型递进式分配器
Integrated U-shaped progressive distributor

集成U型递进式分配器是一种将一定量的润滑脂按规定顺序，依次逐个把工作柱塞里的润滑脂输送到润滑点，每个工作柱塞副是利用递进式动作而产生的液压力的原理使润滑脂定量的输送，要使柱塞副以恒定量进行排油注油就必须要对分配器进行供给一定压力的润滑脂，注意对于分配器的出油口，不能堵塞任一出口口，而影响其正常工作，否则会损坏分配器。适用于各种小型机床、工程机械、纺织机械、印包机械及大型递进式润滑系统的子分配器。

Integrated progressive distributor is a kind of distributor that delivers fixed volume lubricant in each trunkpiston chamber of a valve to lubrication points in certain sequences. Each working trunkpiston set delivers volume lubricant to lubrication point by using principle of progressive action producing hydraulic pressure, following the cycling action of the previous trunkpiston set. To make this distributor discharge oil in constant capacity, we must supply this u-shaped distributor with lubricant with certain pressure, otherwise working trunkpiston set will not sequently delivery lubricant to lubrion point and realize lubrication in progressive way. Similarly, once supplied pressured lubricant stops flowing, the working trunkpiston set of the distributor will also stop. Only when lubricant with pressure flows again in the valve, each working trunkpiston set in the distributor will revover lubrication cycle at the same point.

● 型号标记及其说明
Model number and explanations



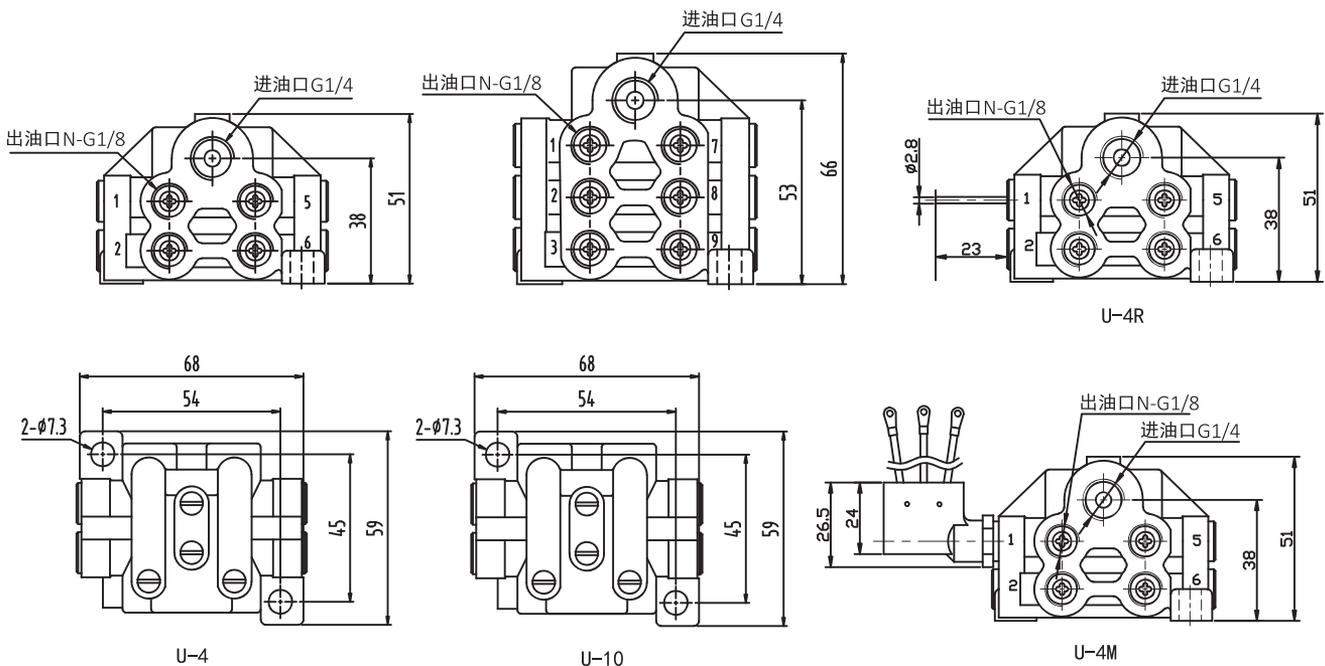
● 外形与安装尺寸
Outside and installation dimensions

● 规格型号及技术参数
Product specifications



型号 Model	出油口数 Number of discharge	排量 Discharge capacity(ml/cyc)	最大压力 Max pressure (MPa)	最高循环速率 Max.cycle rate	工作环境温度 Ambient temperature	使用油脂 Grease used
U-4R	4	0.3	15	200cyc/min or 60cyc/min (装有指示器) (with indicator)	-10°C ~ +60°C	000# ~ 1# 润滑油≥N68#
U-6R	6					
U-8R	8					
U-10R	10					
U-12R	12					
U-4M	4					
U-6M	6					
U-8M	8					
U-10M	10					
U-12M	12					

输出最佳管径与长度: ϕ 4mm长 (Length)0.5-2.5m, ϕ 6mm长 (Length)1.2-3.5m



(5) QS/QM/QA型片式递进式分配器
Chip type progressive distributor

S型片式递进式分配器, 是一种由一片“首片”一片“尾片”和3至8片工作片构成, 通常一组分配器可提供3-16个润滑点的润滑, 注意不可堵塞任一出油口, 而影响其正常工作, 甚至损坏分配器. 适用于各种小型机床和塑料机械设备或大型单线润滑系统的子分配器.

S-type progressive distributor is composed of one "first piece" one "tail piece" and three to eight working pieces. Generally, a group of distributors can provide lubrication for 3-16 lubrication points, please note that it is not allowed to block any oil outlet and affect its normal operation, even damage the distributor. It is suitable for all kinds of small machine tools and plastic mechanical equipment or the sub distributor of large single line lubrication system.

● 外形与安装尺寸
Outside and installation dimensions

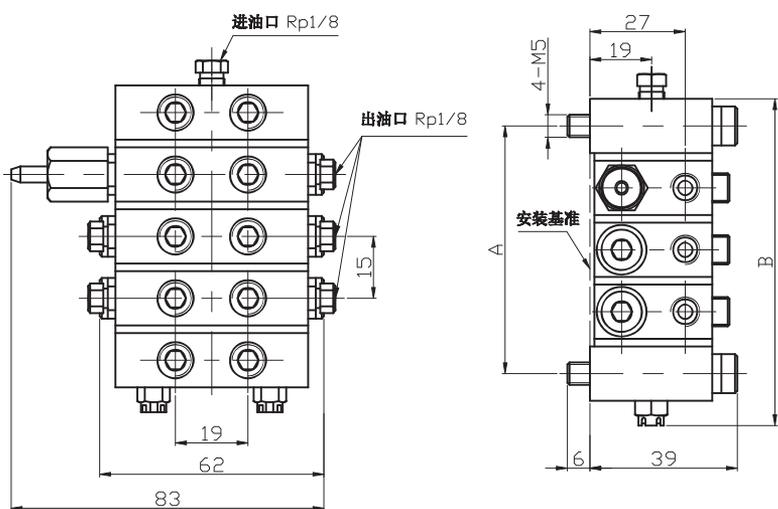


QS型 QM型



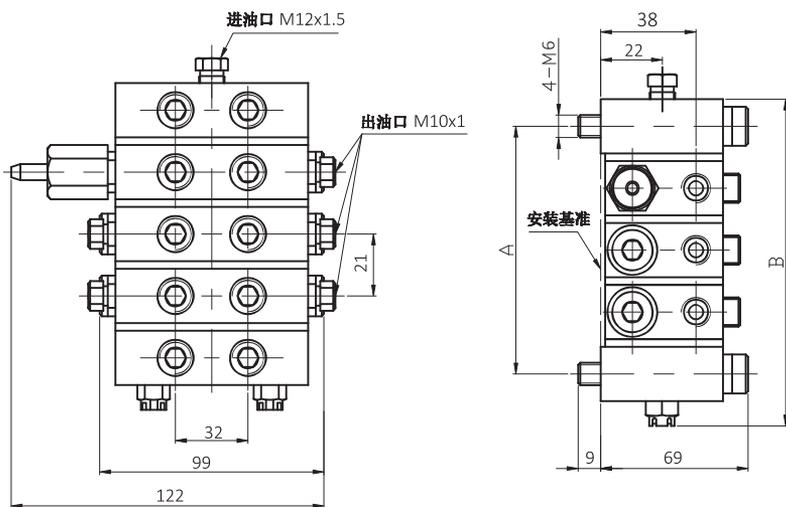
QA型

● 规格型号及技术参数
Product specifications



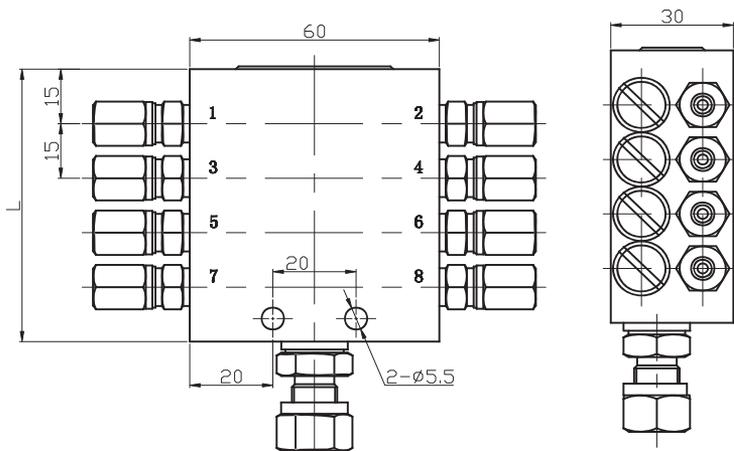
QS型

工作片数 Number of workpieces	A (mm)	B (mm)	最高压力 Mpa
3	59.5	79.6	16
4	74.6	94.4	
5	89.5	109.1	
6	104.6	123.9	
7	119.6	138.7	
8	134.7	153.5	



QM型

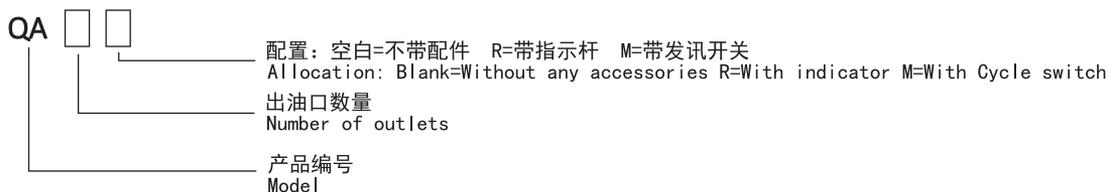
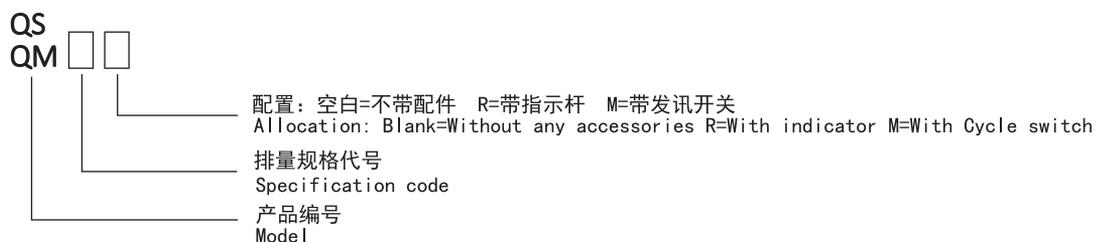
工作片数 Number of workpieces	A (mm)	B (mm)	最高压力 Mpa
3	90	143	25
4	110.5	163	
5	131	183	
6	151.5	203	
7	172	223	
8	192.5	244	
9	213	264	
10	233.5	284	



QA型

出油口数 Number of discharge	L (mm)	排量 ml/cyc	公称压力 Mpa	重量 (kg)
6	60	0.25	25	0.86
8	75			1.15
10	90			1.44
12	105			1.73
14	120			2.02
16	135			2.31

● 型号标记及其说明
Model number and explanations



排量规格代号 Specification code	05T	05S	10T	10S	15T	15S	20T	20S	25T	25S	30T	30S	35T	35S
排量 (ml/cyc) Discharge capacity	0.08	0.16	0.16	0.32	0.24	0.48	0.32	0.64	0.4	0.8	0.48	0.96	0.56	1.12

T代表每片出油口数量为2, S代表每片出油口数量为1.

T represents the number of outlets per piece is 2, s represents the number of outlets per piece is 1

五、附件 Enclosure

1 稀油过滤器 Oil filter

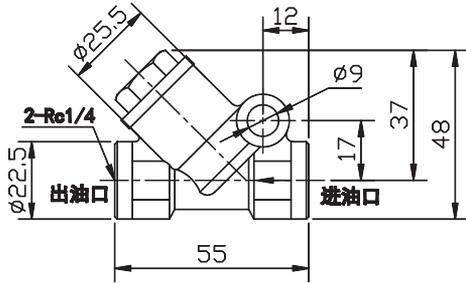
FG型烧结式高密度滤油器, 其过滤精度有10μ、25μ、125μ三种, 它具有压力损失小, 结构紧凑, 安装方便等特点, 适用于周期或连续润滑系统。

FG sintered type high precision oil filters are available in three kinds of percision :10μ、25μ、125μ,featuring low pressure loss, compact structure and ease of installation ,applicable or continuous lubrication systems.

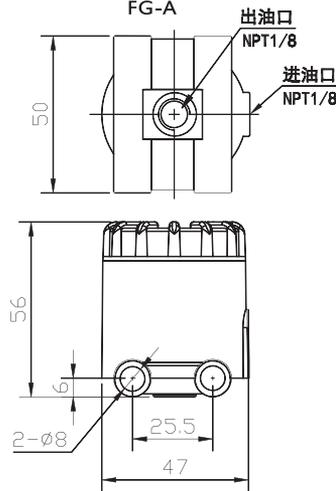
● 外形与安装尺寸
Outside and installtion dimensions



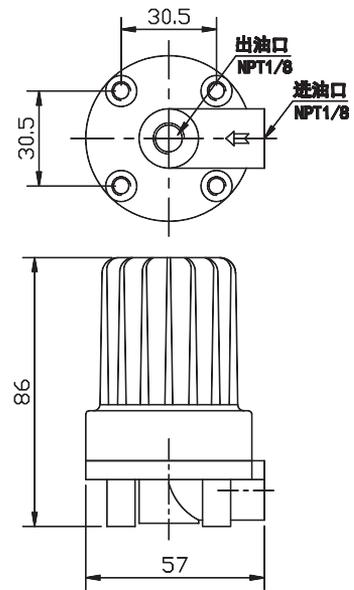
FG-C



FG-A



FG-B



● 规格型号及技术参数
Product specifications

型号 Model	排量 Discharge capacity(ml/cyc)	最大压力 Max pressure (MPa)	过滤精度 (μ)	进油口螺纹 Oil inlet and outlet thread
FG-C	1	3.5	150	Rc1/4
FG-A0525	0.5		25	M8x1
FG-A7125	7		125	
FG-B0310	0.3		10	Rc1/8
FG-B1625	1.6		25	
FG-B10125	10		125	

2 压力表
Pressure gauge

● 规格型号及技术参数
Product specifications

型号 Model	安装方向 Installation direction	测量范围 Measurement range(Mpa)	安装螺纹 Joint spec	重量 Weight (KG)
FB-A25	径向	0-2.5	NPT1/8	0.06
FB-A4		0-4		
FB-A6		0-6		
FB-B6	轴向	0-6		

● 外形与安装尺寸
Outside and installtion dimensions



FB-A ***



FB-B ***

3 HJY型手动加油枪

Model HJY manual refueling device

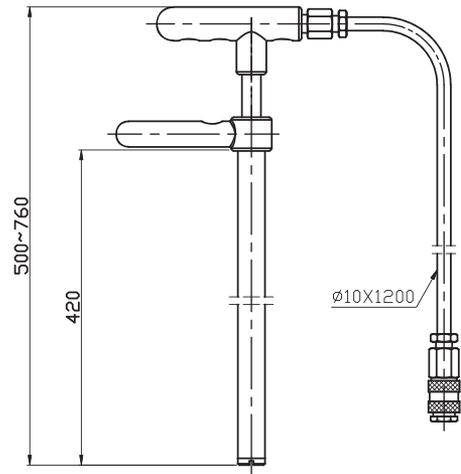
HJY型手动加油枪是一种以人工将润滑脂从油脂桶内输送到各类油脂泵储油桶中的工具, 他能有效的避免空气混入油脂, 避免油脂污染, 是给各类油脂润滑泵现场冲脂必不可少的工具.

HJY type manual oil gun is a kind of tool for manually transporting lubricating grease from the grease barrel to the oil storage barrel of various grease pumps. It can effectively avoid air mixing with grease and grease pollution. It is an essential tool for flushing grease on the site of various grease pumps

● 规格型号及技术参数

Product specifications

型号 Model	冲脂量 Amount of flushing fat (ml/cyc)	冲脂压力 Pressure of grease replenishment (Mpa)	连接螺纹 Connecting thread	冲脂范围 Grease range (NLGL)	重量 Weight (KG)
HJY	50	0.8	快插接头	000#-0#	0.9

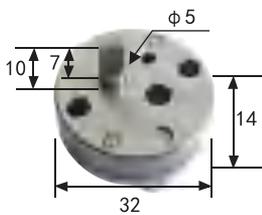


4 小型齿轮泵

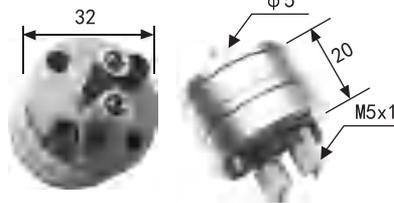
Micro gear pump

● 外形与安装尺寸

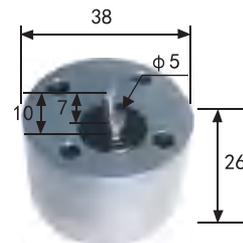
Outside and installation dimensions



FP-A***



FP-B***



FP-C***

● 规格型号及技术参数

Product specifications

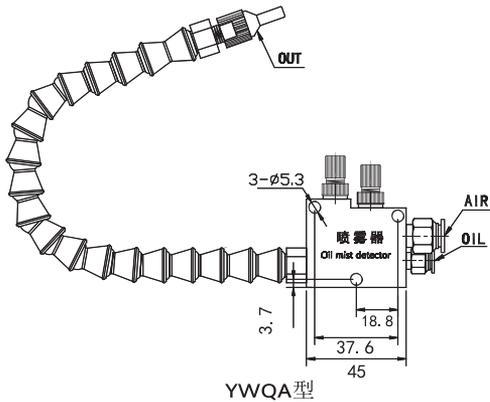
型号 Model	理论排量 Discharge capacity(ml/min)	额定压力 Rated pressure (MPa)	最高压力 Max pressure (MPa)	转速范围 Speed range	转向 Rotation direction	重量 Weight (KG)
FP-A110	110	2.5	5	1300~2000	正反转 Positive inversion	0.08
FP-A160	160		5			0.09
FP-B160	160		4			0.11
FP-C300	300	3.5	8	500~2000		0.19

5 喷雾器

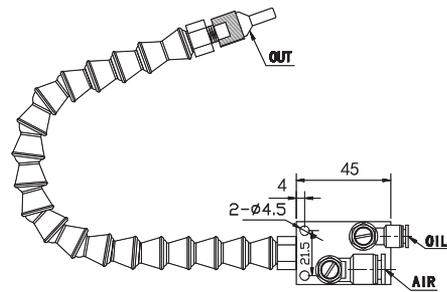
Spraying lubricating system

喷雾器采用真空自呼吸原理,使液体经由喷嘴和空气混合雾化,喷射至刀具、轴承、工件等润滑点,起到润滑及冷却效果,并有除屑洁净功能,进一步减少刀具磨损,提升产品的品质及生产效率。可搭配不同的配件组合使用。

The principle of vacuum self breathing is adopted by atomizer, which makes the liquid atomized through the nozzle and air and sprays to the cutter. The lubrication point such as bearing, workpiece and so on, has the effect of lubrication and cooling, and has the function of removing the chip. It further reduces the tool wear, improves the quality and efficiency of the product. It can be collocation with different parts.



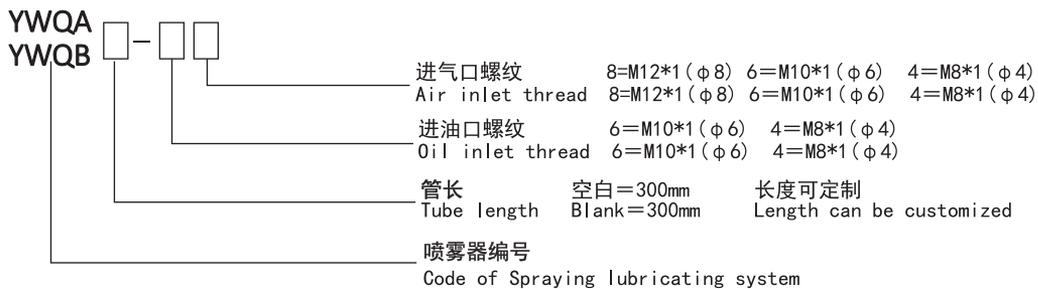
YWQA型



YWQB型

● 型号标记及其说明

Model number and explanations



● 规格型号及技术参数

Product specifications

型号 Model	使用液体类型 Type of liquid used	最大流量 Maximum flow (cc/min)	最小流量 Minimum flow (cc/min)	气体压力 gas pressure (Mpa)	重量 Weight (KG)
YWQA or YWQB	水, 酒精 Water, alcohol	30	0.3	0.5	0.2
	10号高速主轴油 No.10 high speed spindle oil	25	0.2		0.15

6 液位开关

Oil level sensor

- 外形与安装尺寸

Outside and installtion dimensions



- 规格型号及技术参数

Product specifications

型号 Model	温度范围 Temperature rating	材质 material quality	安装螺纹 Joint spec	重量 Weight (KG)
FW-A***	-10~+85°C	聚丙烯 PP	M10x1 or NPT1/8 or GI/8	0.03
FW-A***	-10~+85°C			0.02
FW-A***	-10~+85°C			0.02
FW-B***	-30~+125°C	不锈钢SUS304 Stainless steel		0.06

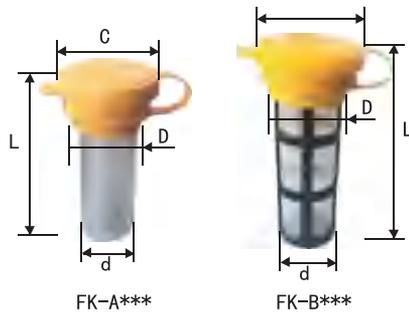
***以产品长度作为代号 ***Product length as code

7 加油口

Oil filler

- 外形与安装尺寸

Outside and installtion dimensions



- 规格型号及技术参数

Product specifications

型号 Model	L (mm)	C (mm)	D (mm)	d (mm)	重量 Weight (KG)
FK-A***	84	42	30	26	0.015
FK-B***	106	49	37	32	0.025

***以产品长度作为代号 ***Product length as code

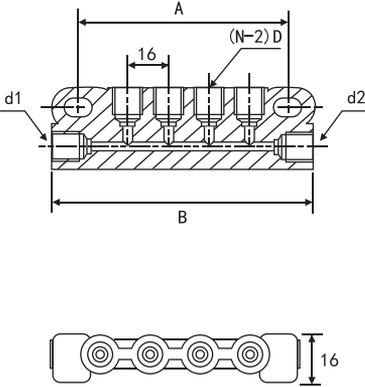
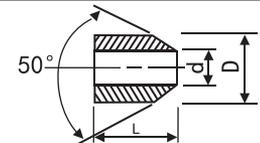
8 润滑系统连接配件

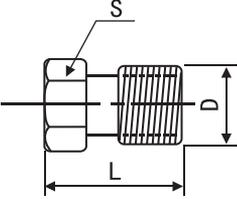
Lubrication system connecting fittings

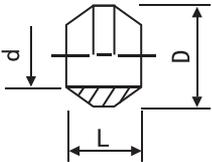
- 规格型号及技术参数

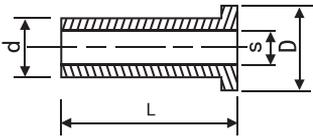
Product specifications

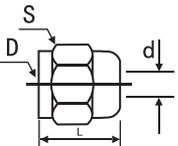
二 通 分 油 块 Joints		型号 Model	出油口数 Number of discharge	d1	d2	A (mm)	B (mm)	
		JF-2-8	2	M8x1	M8x1	28	12	
		JF-2-10		M10x1	M10x1	31	12	
三 通 分 油 块 Joints		型号 Model	出油口数 Number of discharge	D	d1	d2	A (mm)	B (mm)
		JF-3-8	3	M8x1	M8x1	M8x1	28	20
		JF-3-10		M10x1	M10x1	M10x1	35	25
		JF-3-810		M8x1	M10x1	M10x1	35	25
		JF-3-1810R		R1/8	M10x1	M10x1	35	25

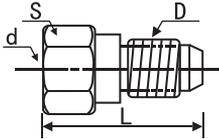
		型号 Model	出油口数 Number of discharge	D	d1	d2	A(mm)	B(mm)
		分油块 Joints 	JF-4-8	4	M8x1	M8x1	M8x1	36
JF-5-8	5		52	64				
JF-6-8	6		68	80				
JF-7-8	7		84	96				
JF-8-8	8		100	112				
JF-9-8	9		116	128				
JF-10-8	10		132	144				
JF-12-8	12		164	176				
JF-4-10	4		M10x1	M10x1	M10x1	38	53	
JF-5-10	5					54	69	
JF-6-10	6					70	85	
JF-7-10	7					86	101	
JF-8-10	8					102	117	
JF-9-10	9					118	133	
JF-10-10	10					134	149	
JF-12-10	12					166	178	
JF-4-810	4		M8x1	M10x1	M10x1	36	48	
JF-5-810	5					52	64	
JF-6-810	6					68	80	
JF-7-810	7					84	96	
JF-8-810	8					100	112	
JF-9-810	9					116	128	
JF-10-810	10					132	144	
JF-12-810	12					164	176	
JF-4-8S10	4		M8x1	M8x1	M10x1	36	48	
JF-5-8S10	5					52	64	
JF-6-8S10	6					68	80	
JF-7-8S10	7					84	96	
JF-8-8S10	8					100	112	
JF-9-8S10	9					116	128	
JF-10-8S10	10					132	144	
JF-12-8S10	12					164	176	
单锥卡套 Single-cone sealing ring		型号 Model	管外径 Outside diameter	D(mm)	d(mm)	L(mm)		
JBS-4	φ4	6	4.1	4				
JBS-6	φ6	8	6.1	4.5				

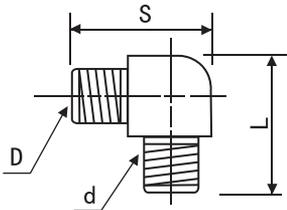
油管接头 Oil tube connector		型号 Model	管外径 Outside diameter	D	S(mm)	L(mm)
		JA-4	φ4	M8x1	8	12
		JA-6	φ6	M10x1	11	13.5
		JA-8	φ8	M12x1	13	16
		JA-10	φ10	M16x1.5	17	20
		JA-12	φ12	M18x1.5	19	16

双锥卡套 Gasket ring		型号 Model	管外径 Outside diameter	D(mm)	d(mm)	L(mm)
		JB-4	φ4	6	4.1	4.75
		JB-6	φ6	8	6.1	6
		JB-8	φ8	10	8.1	5.8
		JB-10	φ10	12	10.1	7
		JB-12	φ12	14	12.2	9

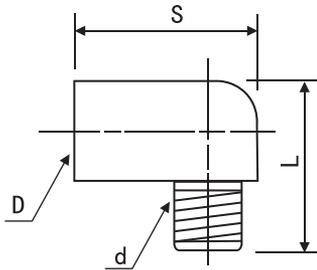
油管衬套 Oil tube sleeve		型号 Model	管径 Outside diameter	D(mm)	d(mm)	S(mm)	L(mm)
		JC-4X0.75	φ4x0.75	4	2.5	1.5	10.5
		JC-4	φ4x1	4	2	1	10.5
		JC-6	φ6x1	5.5	4	3	15
		JC-8	φ8x1	8	6	5	15.5
		JC-10	φ10x1	10	7.5	6.5	15

接头螺母 Joint nut		型号 Model	管外径 Outside diameter	D	d(mm)	S(mm)	L(mm)
		JD-4	φ4	M8x1	4.2	10	12
		JD-6	φ6	M10x1	6.1	12	13
		JD-8	φ8	M12x1	8.1	14	13

直通接头 Through joint		型号 Model	管外径 Outside diameter	d	D	L(mm)	S(mm)
		JPY-410	φ4	M8x1	M10x1	25	12
		JPY-608	φ6	M10x1	M8x1	25	12

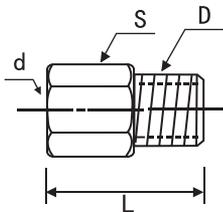
外螺纹直角接头 Outside-connecting double right-angle joint		型号 Model	D	d	L(mm)	S(mm)
		JNC-618NF	M10x1	NPTF1/8	19	19
		JNC-618N	M10x1	NPT1/8	22	30
		JNC-612	M10x1	M12x1	22	22
		JNC-1218N	M12x1	NPT1/8	30	22

直角接头
Right-angle joint

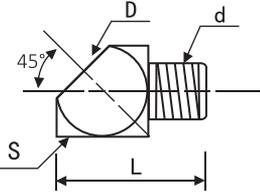


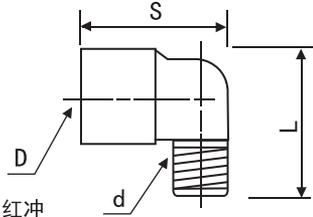
型号 Model	D	d	S(mm)	L(mm)
JN-408	M8x1	M8x1	18	18
JN-410		M10x1	19	19
JN-406F		M6x0.75	20	21
JN-406		M6	18	18
JN-414R		R1/4	23	28
JN-418R		R1/8	19	19
JN-418N		NPT1/8	19	19
JN-438N		NPT3/8	25	30
JN-608		M10x1	M8x1	21
JN-610	M10x1		21	20
JN-614R	R1/4		23	28
JN-618R	R1/8		21	21
JN-618N	NPT1/8		21	20
JN-638N	NPT3/8		25	30
JN-818R	M12x1	R1/8	29	29
JN-814R		R1/4	28	32

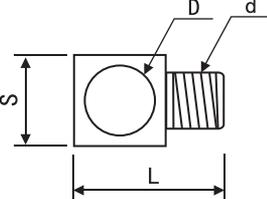
直通接头
Through joint

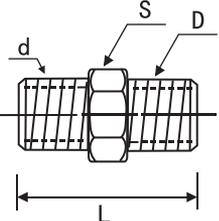


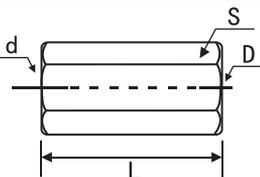
型号 Model	管外径 Outside diameter	d	D	L(mm)	S(mm)
JP-306	φ3	M6x1	M6x1	20	8
JP-406	φ4	M8x1	M6x1	18	10
JP-406F	φ4		M6x0.75	18	10
JP-408	φ4		M8x1	18	10
JP-410	φ4		M10x1	18	11
JP-418N	φ4		NPT1/8	18	11
JP-418R	φ4		R1/8	18	11
JP-608	φ6		M10x1	M8x1	20
JP-610	φ6	M10x1		20	12
JP-618N	φ6	NPT1/8		20	12
JP-618R	φ6	R1/8		20	12
JP-614R	φ6	R1/4		20	14
JP-616	φ6	M16x1.5		30	17
JP-810	φ8	M12x1	M10x1	25	16
JP-1038R	φ10	M16x1.5	R3/8	32	19

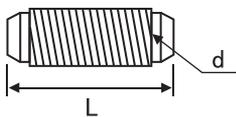
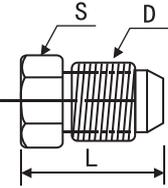
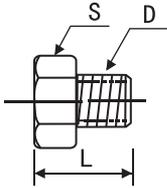
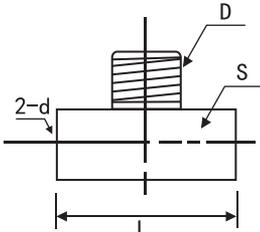
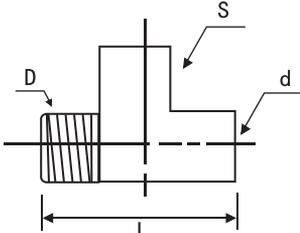
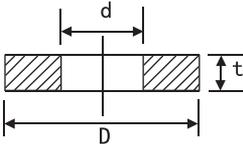
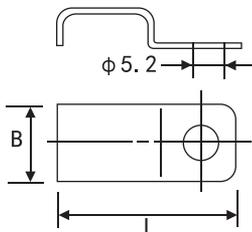
45° 角接头 45 degree angle joint		型号 Model	D	d	L(mm)	S(mm)
		JNA-1/8NF	NPTF1/8	NPTF1/8	21	13

直角接头 Right-angle joint		型号 Model	D	d	L(mm)	S(mm)	材质 Material
		JND-1218R	M12x1	R1/8	25	26	铜 Copper
		JND-1618R	M16x1.5	R1/8	28	28	铜 Copper
		JND-3827NF	3/8-18NPSF	3/8-27NPSF	35	29	铁 ferrum
		JND-3818NF	3/8-18NPSF	3/8-18NPSF	35	29	铁 ferrum

平面直角接头 Plane right-angle joint		型号 Model	D	d	L(mm)	S
		JNB-406	M8x1	M6x1	20	14x14
		JNB-408	M8x1	M8x1	20	12x12
		JNB-418R	M8x1	R1/8	20	12x12
		JNB-418N	M8x1	NPT1/8	20	14x14
		JNB-418RS	M8x1	R1/8	20.6	14x14
		JNB-618R	M10x1	R1/8	20	14x14
		JNB-614R	M10x1	R1/4	28	18x18
		JNB-410	M8x1	M10x1	20	14x14

外接双通接头 Outside-connecting double passage joint		型号 Model	D	d	L(mm)	S(mm)
		JS-8	M8x1	M8x1	25	10
		JS-8R1/8		R1/8	25	10
		JS-810		M10x1	25	10
		JS-10	M10x1	M10x1	25	10
		JS-10R1/8		R1/8	25	10
		JS-R1/8	R1/8	R1/8	25	10
		JS-R1/8R1/2		R1/2	35	22
		JS-N1/8	NPT1/8	NPT1/8	25	10
		JS-R1/4R1/8	R1/4	R1/8	27	14
JS-R1/410	M10x1	27		14		

内接双通接头 In double pass joint		型号 Model	D	d	L(mm)	S(mm)
		JQ-4	M8x1	M8x1	28	12
		JQ-6	M10x1	M10x1	28	12
		JQ-410	M8x1	M10x1	28	12

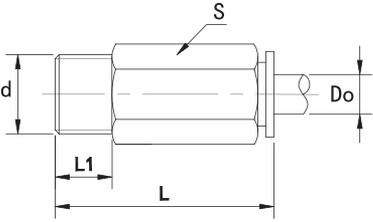
接头连接 Connecting joint		型号 Model	d	L (mm)		
		JR-8	M8x1	23		
		JR-10	M10x1	25		
堵头 Oil plug		型号 Model	D	L (mm)	S (mm)	
		JE-8	M8x1	16	8	
		JE-10	M10x1	18	10	
		JE-12	M12x1	20	12	
		JES-8	M8x1	11	11	
		JES-1/8	R1/8	14	14	
		JES-1/8A	R1/8	13	10	
		JES-10	M10x1	11	14	
正三通接头 Front outside-connecting T joint		型号 Model	D	2-d	L (mm)	S (mm)
		3JN-8	M8x1	M8x1	28	12
		3JN-810	M8x1	M10x1	30	
		3JN-10	M10x1	M10x1	30	
		3JN-108	M10x1	M8x1	28	
3JN-R1/88	R1/8	M8x1	28			
侧三通接头 Side outside-connecting T joint		型号 Model	D	d	L (mm)	S (mm)
		3JM-8	M8x1	M8x1	28	12
		3JM-810	M8x1	M10x1	30	
		3JM-10	M10x1	M10x1	30	
		3JM-108	M10x1	M8x1	28	
3JM-R1/88	R1/8	M8x1	28			
密封垫片 Seal ring		型号 Model	D (mm)	d (mm)	t (mm)	
		JT-8	12	8	1.5	
		JT-10	14	10		
		JT-12	15	12		
		JT-12S	16	12		
JT-22	32	22.5	2			
管夹 One-side tube clip		型号 Model	B (mm)	L (mm)	管数 Number of tubes	
		JZ-1104	10	20	1φ4	
		JZ-1204		24.5	2φ4	
		JZ-1106		22.5	1φ6	
JZ-1206	29	2φ6				

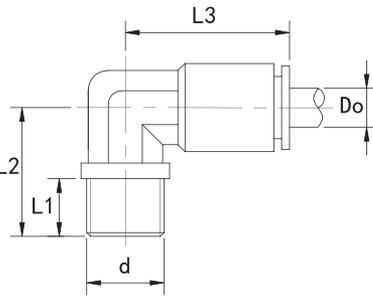
油刷 Oil brush		型号 Model	D	d (mm)	t (mm)	L (mm)	S (mm)
		JO-18N20	NPT1/8	19	20	58	13
		JO-820	M8x1	19	20	58	13
		JO-1022	M10x1	28	22	65	17
		JO-18N20L	NPT1/8	40	20	78	13
		JO-18N22	NPT1/8	28	22	65	17

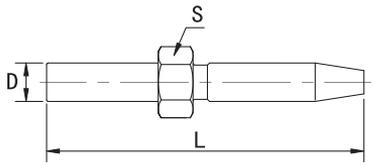
旋转接头 Rotary joint		型号 Model	D	d	L (mm)	S (mm)
		XZ-4R1/8	M8x1	R1/8	23	18
		XZ-410		M10x1		
		XZ-408		M8x1		
		XZ-610	M10x1	M10x1	28	18
		XZ-6R1/8		R1/8		
XZ-6R1/4	R1/4	22				

卡套式直通接头 Bayonet straight connection		型号 Model	D	d	L (mm)	S (mm)	S1 (mm)
		JPB-6R1/8	φ6	R1/8	30	11	12
		JPB-610		M10x1	30	11	12
		JPB-6R1/8L		R1/8	38	14	14
		JPB-6R1/4		R1/4	42	14	14
		JPB-8R1/8	φ8	R1/8	40	13	17
		JPB-8R1/4		R1/4	42	14	17
		JPB-8R3/8		R3/8	43	17	17
		JPB-10R1/4	φ10	R1/4	42	14	21
		JPB-10R3/8		R3/8	48	17	21

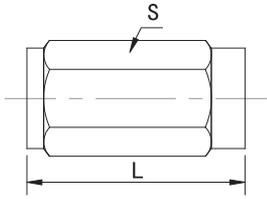
卡套式直角接头 Bayonet type square joint		型号 Model	D	d	L (mm)	S (mm)	S1 (mm)
		JPZ-6R1/8	φ6	R1/8	26	11	12
		JPZ-610		M10x1	26	11	12
		JPZ-6R1/8L		R1/8	28	13	14
		JPZ-8R1/8	φ8	R1/8	28	13	14
		JPZ-8R1/4		R1/4	38	14	17
		JPZ-10R1/4	φ10	R1/4	42	17	21
JPZ-10R3/8	R3/8	42		17	21		

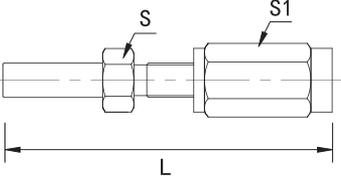
快插式直通接头 Quick plug straight connector		型号 Model	管外径 Do	d	L (mm)	L1 (mm)	S (mm)
		JFS4-05	φ4	M5	5	21	9
		JFS4-06		M6x1	6	24	11
		JFS4-08		M8x1	6	19	10
		JFS4-10		M10x1	7	19	12
		JFS4-R1/8		R1/8	7	19	10
		JFS6-06	φ6	M6x1	6	24	13
		JFS6-08		M8x1	6	24	12
		JFS6-10		M10x1	7	24	12
		JFS6-R1/8		R1/8	7	24	12
		JFS8-10	φ8	M10x1	7	29	14
		JFS8-R1/8		R1/8	7	29	14
		JFS8-R1/4		R1/4	9	27	14

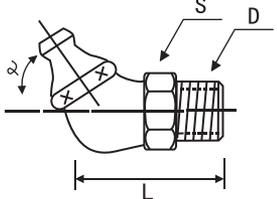
快插式直角接头 Quick plug type right angle connector		型号 Model	管外径 Do	d	L1 (mm)	L2 (mm)	L3 (mm)
		JFS4-05	φ4	M5	5	17	19
		JFS4-06		M6x1	6	15	20
		JFS4-08		M8x1	6	18	19
		JFS4-10		M10x1	7	19	19
		JFS4-R1/8		R1/8	7	19	19
		JFS6-06	φ6	M6x1	7	18	21.5
		JFS6-08		M8x1	6	19	23.5
		JFS6-10		M10x1	7	20	23.5
		JFS6-R1/8		R1/8	7	20	23.5
		JFS8-10	φ8	M10x1	7	21	26
		JFS8-R1/8		R1/8	7	21	26
		JFS8-R1/4		R1/4	9	23	26

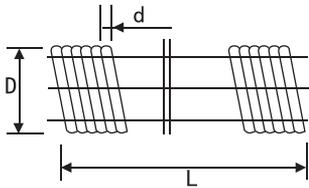
直通接头芯 Internal connection of through joint		型号 Model	D	L (mm)	S (mm)	适用于 Apply to
		XZ-4R1/8	φ4	30	10	φ8.6x4.2 树脂管
		XZ-410		18	10	
		XZ-408		30	10	
		XZ-610	φ6	60	10	φ11.6x5 树脂管
		XZ-6R1/8		58	8	
XZ-6R1/4	φ8	32	12			

钢件
shell part

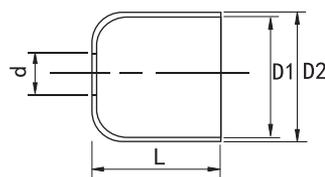
The external connector 接头外套		型号 Model	L (mm)	S (mm)
		XT-610	28	12(配XZ-610)
		XT-6R1/8	26	12(配XZ-6R1/8)

直通接头芯组件 Straight through core assembly		型号 Model	L (mm)	S (mm)	S1 (mm)
		XZT-610	63	10	12
		XZT-6R1/8	59	8	12

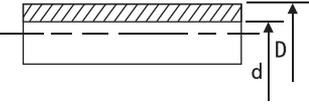
黄油嘴 Grease nozzle	<p>材质铁镀锌型号后面加“T”例: JH-106T Material: "T" is added to the code if it is chrome(zinc)plate iron, e.g. JH-106T</p>  <p>$\alpha=0^\circ$: 直黄油嘴 Straight grease nozzle $\alpha=45^\circ$: 45° 直黄油嘴 Bent grease nozzle $\alpha=90^\circ$: 90° 直黄油嘴 Bent grease nozzle</p>	型号 Model	D	α	L (mm)	S (mm)
		JH-106	M6x1	0°	13	8
		JH-108	M8x1	0°	15	10
		JH-118	R1/8	0°	17	11
		JH-110	M10x1	0°	17	11
		JH-208	M8x1	45°	19	10
		JH-218	R1/8	45°	19	11
		JH-210	M10x1	45°	19	11
		JH-308	M8x1	90°	19	10
		JH-318	R1/8	90°	22	11
		JH-310	M10x1	90°	22	11

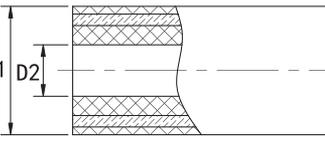
弹簧护套 Spring cover		型号 Model	D	d	圈型 Specifications
		JG-4***	$\phi 5.5$	$\phi 0.5$	疏圈 Loose coil spring
		JG-6***	$\phi 7.7$	$\phi 0.6$	
		JGM-4***	$\phi 5.5$	$\phi 0.5$	密圈 Closed coil
		JGM-6***	$\phi 7.7$	$\phi 0.6$	

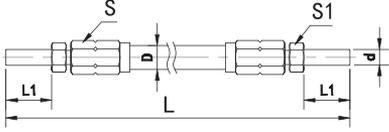
注: 一般每条2米供货 如JGM-4200
Note: Usually supplied in 2m length, eg. JGM-4200

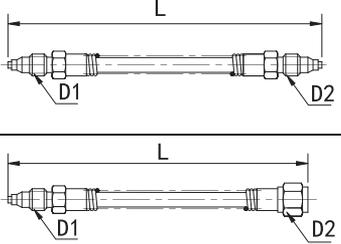
护套头子 Wire head protective sleeve		型号 Model	D1 (mm)	D2 (mm)	d (mm)	L (mm)
		JT-4	$\phi 6$	$\phi 7$	$\phi 4.2$	7.4
		JT-6	$\phi 8$	$\phi 9$	$\phi 6.2$	10.5

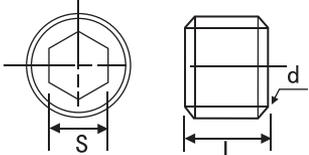
表面镀白锌
The surface is plated with white zinc

油管 Oil tube		型号 Model	D	d	材质 Material
		JU-4T	φ4	φ2	铜 Copper
		JU-4N	φ4	φ2	尼龙 Nylon
		JU-4x0.75N	φ4	φ2.5	尼龙 Nylon
		JU-6N	φ6	φ4	尼龙 Nylon
		JU-4L	φ4	φ2	铝 Aluminum
		JU-6L	φ6	φ4	铝 Aluminum
		JU-6x1.25	φ6	φ3.5	黑色尼龙 Black nylon

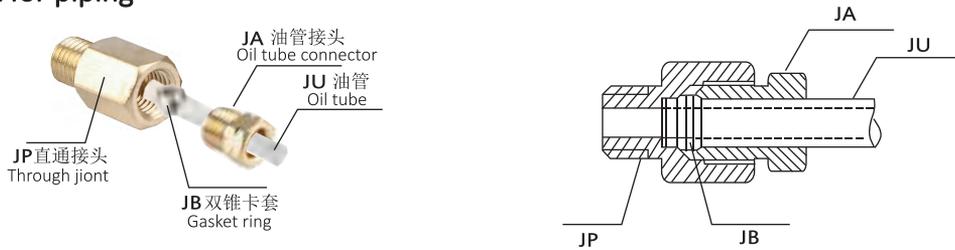
锥形闭口螺丝 Taper screw		型号 Model	D1 (mm)	D2 (mm)	使用压力 (Mpa)
		GJU-63	φ6	φ3	16
		GJU-84	φ8.6	φ4.2	20
		GJU-104	φ10	φ4	25

高压聚酯管总成 High pressure polyester tube assembly	 <p>按要求定制长度 Customize the length as required</p>	型号 Model	D	d (mm)	S1 (mm)	S (mm)	L (mm)	工作压力 (Mpa)
		GJUT-86L	φ8.6x4.2	φ6	10	12	30	20
		GJUT-86					18	
		GJUT-106L	φ10x4	φ6	10	13	30	25
		GJUT-106					18	
		GJUT-108	φ10x4	φ8	12	13	32	

钢丝护套总成 Steel wire sheath assembly	 <p>按要求定制长度 Customize the length as required</p>	型号 Model	D	d (mm)	S1 (mm)	S (mm)	L (mm)	工作压力 (Mpa)
		GJUT-86L	φ8.6x4.2	φ6	10	12	30	20
		GJUT-86					18	
		GJUT-106L	φ10x4	φ6	10	13	30	25
		GJUT-106					18	
		GJUT-108	φ10x4	φ8	12	13	32	

锥形闭口螺丝 Taper screw		型号 Model	d	L (mm)	S
		JLR1/8	R1/8	7	内Inside 5

★ 配管注意事项 Important for piping



拧紧的方法

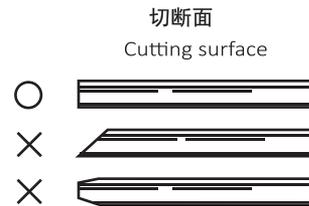
Methods of fastening

- 用专用工具切断金属铜、铝、尼龙管、切面保持与管轴线垂直，不能有崩、斜切、变现象。
- 将油管接头与卡套套入油管，卡套前端必须露出2MM的油管。
- 将油管接入直通接头至底部，同时拧入油管接头，并用工具拧紧。
- Cut the metal aluminum,copper,nylon tube with sharp cutting tool,keep the cutting surface vertical with pipe axle and don't leave any cracks,oblique cutting or squash.
- Fix the JA joint and JB sealing washer to oil tube. 2mm of oil tube must be left before JB sealing washer.
- Plug oil tube in JP joint to reach the bottom,and screw in JA joints and fasten with tools.

油管切断方法

Oil tube cutting method

- 切断金属铝、铜管，请用专用切管机
Use special-purpose tube cutting machine to cut metal aluminum, copper tube.
- 推荐插入油管衬套切断
We suggest cutting by getting in oil tube sleeve and cutting.



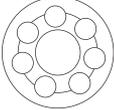
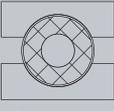
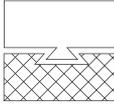
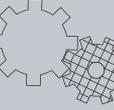
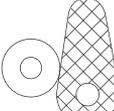
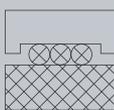
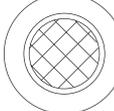
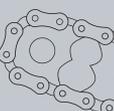
五、润滑知识 Lubrication knowledge

ISO粘度分类 (GB/T3141-94)

ISO viscosity classification (GB/T3141-94)

ISO粘度等级	中间点运动等级 (40°C) / (mm ² /s)	运动粘度范围 (40°C) / (mm ² /s)		ISO粘度等级	中间点运动等级 (40°C) / (mm ² /s)	运动粘度范围 (40°C) / (mm ² /s)	
		最小	最大			最小	最大
2	2.2	1.98	2.42	100	100	90.0	110
3	3.2	2.88	3.52	150	150	135	165
5	4.6	4.14	5.06	220	220	198	242
7	6.8	6.12	7.48	320	320	288	352
10	10	9.00	11.0	460	460	414	506
15	15	13.5	16.5	680	680	612	748
22	22	19.8	24.2	1000	1000	900	1100
32	32	28.8	35.2	1500	1500	1350	1650
46	46	41.4	50.6	2200	2200	1980	2420
68	68	61.2	74.8	3200	3200	2880	3520

各种运动副所需油量 计算公式
Calculation of oil volume required for lubrication

运动副种类 Types of Moving objects	抵抗式润滑系统 Resist-type system	容积式、递进式润滑系统 Volume type、Progressive type lubrication system
 <p>滚动轴承 (滚子、滚珠、滚针) Ball-bearing (Roller bearing Cylindrical bearing Needle bearing)</p>	<p>油量Q=[(轴承孔径 X 列数)/254] X K Oil volume Q=[(bearing diameter X bearing qty)/254] X K</p>	<p>油量Q=[(轴承孔径 X 列数)/25000] X K Oil volume Q=[(bearing diameter X bearing qty)/25000] X K</p>
 <p>滚动轴承和滚动丝杆 Plain bearing</p>	<p>油量Q=[(轴承孔径 X 轴承长度)/4301] X K Oil volume Q=[(bearing diameter X contact length)/4301] X K</p>	<p>油量Q=(π X 轴承孔径 X 轴承长度 /25000) X K Oil volume Q=[(π X bearing diameter X contact length)/25000] X K</p>
 <p>平面导轨 Smooth sliding track</p>	<p>油量Q=[(长度+移动件行程) X 宽度/16130] X K Oil volume Q=[(block length+shift motion)X block width/16130] X K</p>	<p>油量Q=[(长度+移动件行程) X 宽度/25000] X K Oil volume Q=[(block length+shift motion)X block width/25000] X K</p>
 <p>齿轮 Gear</p>	<p>油量Q=[(齿轮节圆直径 X 齿宽)/2200] X K Oil volume Q=[(diameter of pitchcircle X gear width)/2200] X K</p>	<p>当大分度圆直径≤2倍小分度圆直径 油量Q=[π X 分度圆直径之和 X 齿宽/25000] X K 当大分度圆直径>2倍小分度圆直径 油量Q=[π X 小分度圆直径 X 齿宽/12500] X K When large indexing circle diameters≤2 times the diameter of the Small pitch circle diameter Oil volume Q=[(π X The sum of the circle diameter X Tooth width)/25000] X K When large indexing circle diameter>2 times the diameter of the Small pitch circle diameter Oil volume Q=[(π X The sum of the circle diameter X Tooth width)/12500] X K</p>
 <p>凸轮 Cam</p>	<p>油量Q=[接触表面积/8100] X K Oil volume Q=[Contact surface area/8100] X K</p>	<p>蜗轮蜗杆 worm and gear 油量Q=[π X 分度圆直径之和 X 涡轮宽度/25000] X K Oil volume Q=[π X The sum of the circle diameter X Turbine width/25000] X K</p>
 <p>线轨 Ball-bearing track</p>	<p>油量Q=[(移动件行程 X 列数)/850] X K Oil volume Q=[(shift motion X The number of columns)/850] X K</p>	<p>迷宫式密封 Labyrinth seal 油量Q=[π X 轴径 X 接触宽度 /25000] X K Oil volume Q=[π X Shaft diameter X Contact width/25000] X K</p>
 <p>圆柱导轨 Cylindrical sliding track</p>	<p>油量Q=[(长度+移动件行程) X 直径/4300] X K Oil volume Q=[(shift motion +axle length) X axle diameter/4300] X K</p>	
 <p>链条 Chain</p>	<p>油量Q=[(链长 X 链宽)/13000] X K Oil volume Q=[(chain length X width)/13000] X K</p>	
<p>注意 事项 matters need attention</p>	<p>1. 此公式是经验公式，适用稀油润滑； 2. 单位 Q为：毫升 (ml)/小时 (h)，长度单位为：毫米 (mm)； 3. K为修正系数，与载荷和运动速度有关， 0-1.5转/分钟[行程(次)/分钟] K=0.1-0.2 1.5-15转/分钟[行程(次)/分钟] K=0.2-0.5 15-150转/分钟[行程(次)/分钟] K=0.5-1.1 150-600转/分钟[行程(次)/分钟] K=1.1-1.65 大于600转/分钟[行程(次)/分钟] 速度每增加10倍K值将增加一倍。 1 the formula is empirical formula, which is suitable for thin oil lubrication; 2. Lubricating oil Q is "ml/h", unit of length is "mm" 3. K is the correction factor, which is related to the load and movement speed. 0-1.5 turn / minute[Time / min] K=0.1-0.2 1.5-15 turn / minute[Time / min] K=0.2-0.5 15-150 turn / minute[Time / min] K=0.5-1.1 150-600 turn / minute[Time / min] K=1.1-1.65 More than 600 turn / minute[Time / min] Speed per 10 times increase in K value will be doubled</p>	<p>1. 润滑油单位 Q为毫升 (ml)/小时 (h)； 2. 润滑脂单位 Q为毫升 (ml)/4小时 (h)； 3. 长度单位为：毫米 (mm)； 4. K为修正系数，与环境有关； 一般环境 K=1.0； 粉尘环境 K=1.5； 潮湿环境 K=2.0； 粉尘和潮湿环境 K=2.5； 5. 以上计算用于手动润滑泵，对于全自动润滑油量减半。 1. Lubricating oil Q is "ml/h" 2. Lubricating Grease Q is "ml/4h" 3. unit of length is "mm" 4. K as the correction factor, and the environment has the relationship General environment K=1.0; Dust environment K=1.5; Moisture environment K=2.0; Dust and moisture environment K=2.5; 5. The above calculation is used for manual lubrication pump, for full automatic lubrication Oil quantity halved.</p>