

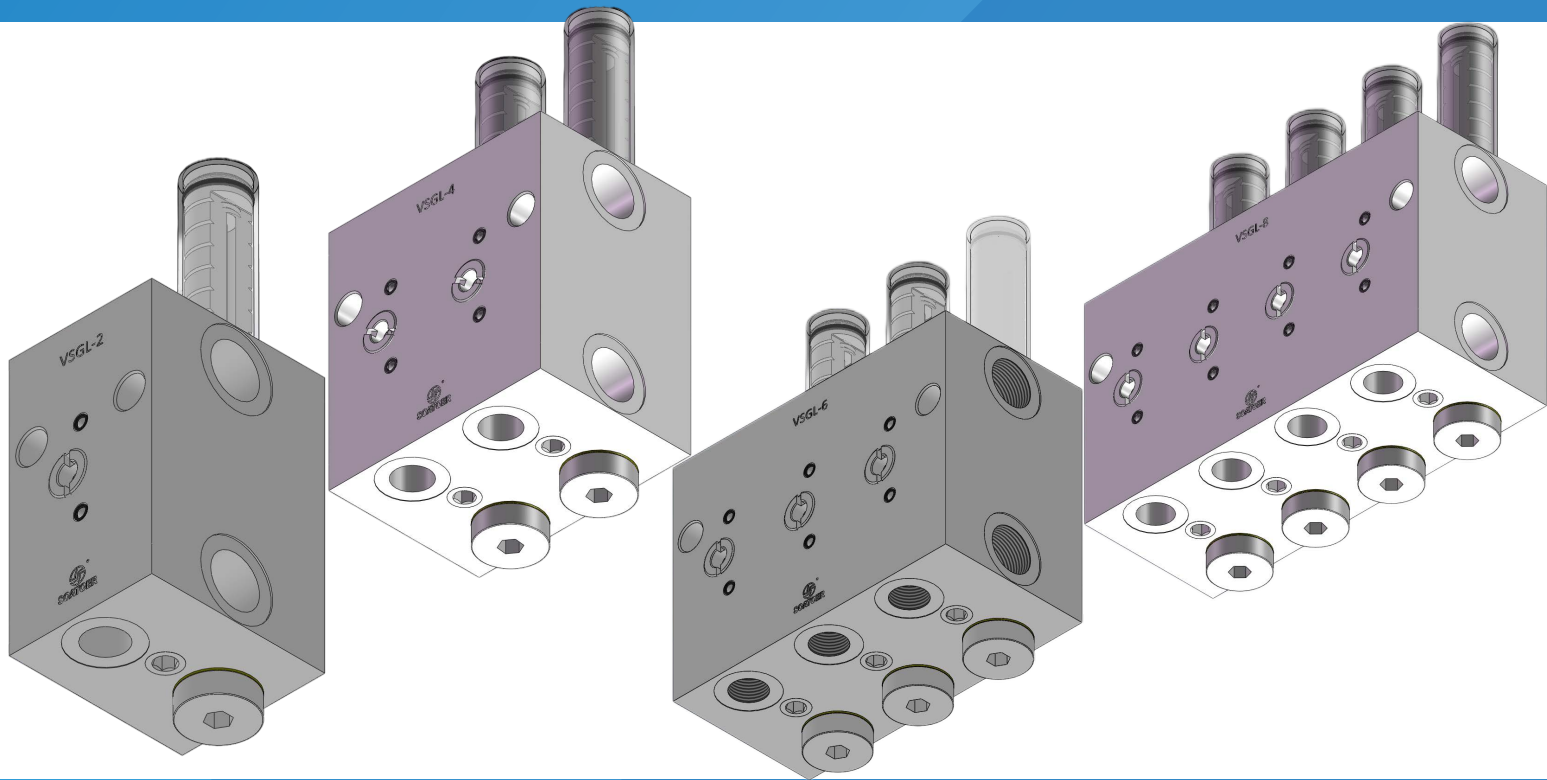
SOATOER

AN ISO 9001 APPROVED COMPANY

VSGL

双线计量分配系统

整天不停工作的设计理念，每天在极端条件和困难的环境中运行



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Descrizione generale 一般描述

)
 双线润滑系统设计用于大型工业结构、设施和系统。

Use the two-line metering devices of the VSGL series only for the supply of lubricant in centralized lubrication systems.
 VSGL系列的两线计量装置仅用于集中润滑系统的润滑供应。

Do not install or remove the metering devices when the system is under pressure or the pump in operation.
 请勿在系统承压或泵运行时安装或拆卸计量装置。

· Always protect the centralized lubrication system connected to the pump with a pressure reducing valve.
 使用减压阀保护与泵相连的集中润滑系统。

· Incorrect operation may lead to damage resulting from insufficient or excessive lubrication of bearings or lubrication points. 不正确的操作可能导致由于轴承或润滑点润滑不足或过度而导致的损坏。

· Your own alterations or modifications of an installed system should only be carried out if approved with the manufacturer or his appointed dealer.

只有在得到制造商或其指定经销商的批准后，您才可以自行对已安装的系统进行修改。

· Use only original SOATOER spare parts or parts authorized by SOATOER.

只能使用原装或经SOATOER授权的SOATOER备件

operation, Maintenance and Repair 操作、维护和维修

Repairs should be carried out only by qualified persons who have been charged with the repair work and are familiar with centralized lubrication systems. 维修应由已负责维修工作并熟悉集中润滑系统的合格人员进行。since the pistons in the metering devices are fit with the smallest tolerances, the metering device must be replaced when the pistons are worn. 由于计量装置中的活塞与最小的公差配合，当活塞磨损时，必须更换计量装置。when synthetic lubricants are used, bear in mind that they must be compatible with the sealing material of the metering devices (polyurethane or Viton).

当使用合成润滑剂时，请记住它们必须与计量装置的密封材料(聚氨酯或Viton)兼容。

Use only lubricants which are appropriate for centralized lubrication systems. If in doubt, ask the supplier.

只使用适合集中润滑系统的润滑油。如果有疑问，问供应商。

Installation 安装

For all work at the metering device, observe extreme cleanliness. 在计量装置的所有工作，保持高度清洁

- Attach the metering devices to even surfaces without tension. 将计量装置固定在无张力的均匀表面上。

when base plates are used (see Accessories), first weld the base plates without the metering devices and then attach the metering devices onto them.

使用基板时(见附件)，先在不带计量装置的情况下焊接基板，然后将计量装置安装在基板上。

- Protect the metering devices from dust and influences of heat (observe the maximum admissible operating temperatures). 保护计量装置免受灰尘和热的影响(观察最高允许工作温度)。

- The metering devices must be easily accessible for . check and installation work.

计量装置必须易于使用。检查和安装工作。

· Before connecting the feed lines to the metering devices, fill them with lubricant.

在将馈线连接到计量装置之前，要给它们注满润滑剂。

· when connecting the main lines take care to always connect the same line (I or II) to the same metering device inlet. 在连接主线时，要注意始终将同一条线(I或II)连接到相同的计量装置入口。

This makes it easier to check of the metering device because all indicator pins are either in or out after each cycle.

这使得检查计量装置更容易，因为在每个周期后，所有的指示器引脚要么在里面，要么在外面。

Data sheet 技术参数

output volume: Q= 0-5 cm³/stroke, adjustable.

operating pressure: p_{max}= 400 bar.

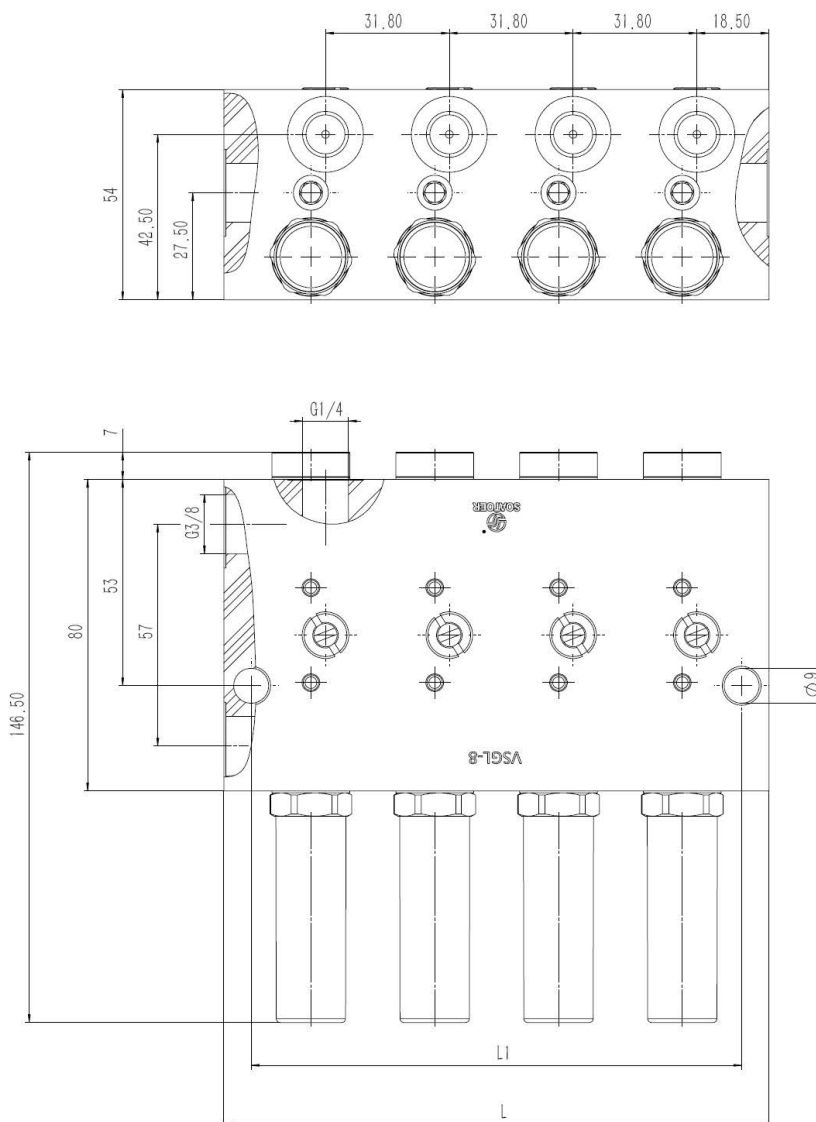
p_{min}= 35 bar.

Main line connection: G3/8.

Feed line connection: G1/4.

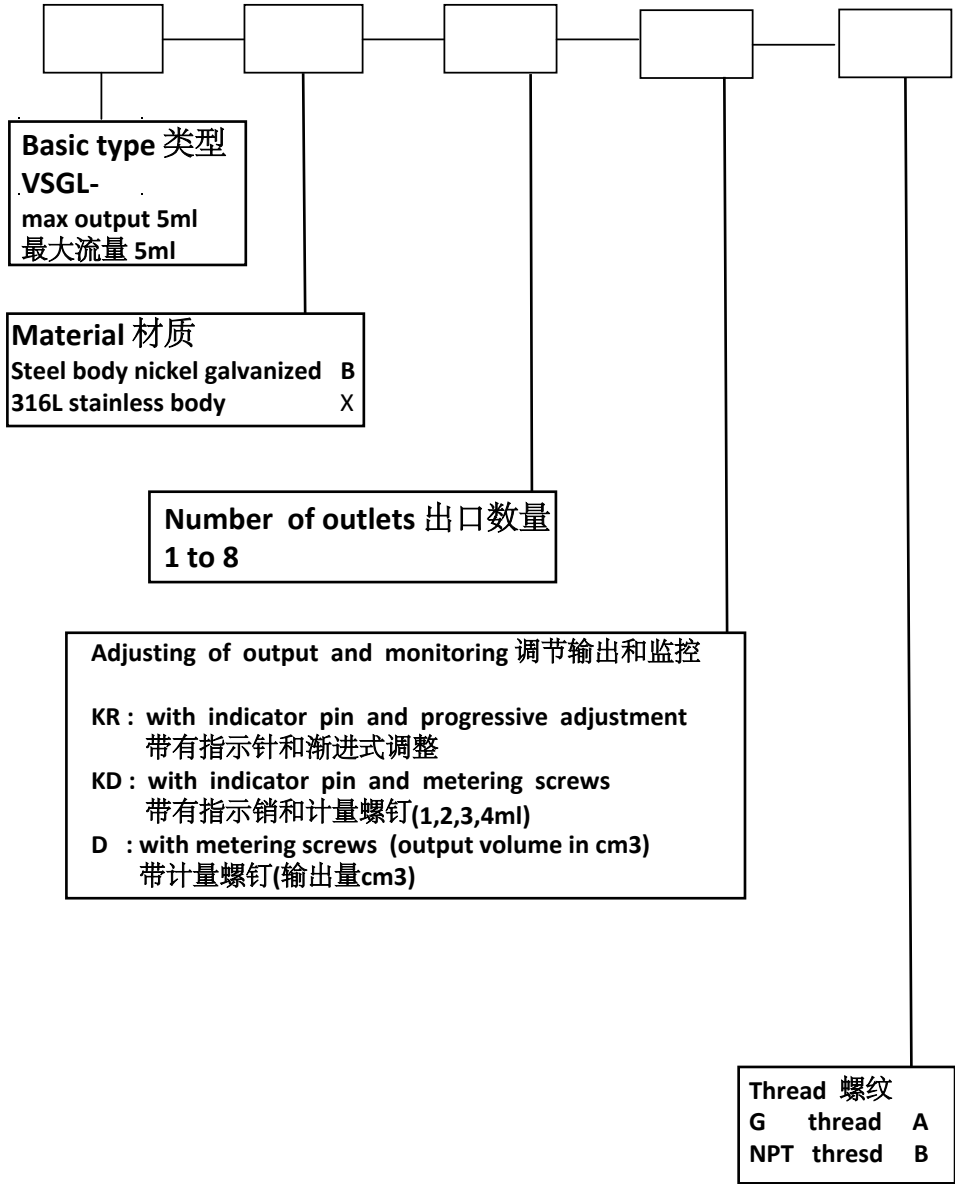
Dimernsion 尺寸

TYPE	VSGL2-KR	VSGL4-KR	VSGL6-KR	VSGL8-KR
Number of outlets	2	4	6	8
L1(mm)	30.5	62	94	126
L(mm)	44.5	76	108	140
Code	2101012	2101014	2101016	2101018



Ordering Information 订购信息:

Refer to the following ordering menu 请参阅以下订购菜单:



ORDER EXAMPLE 订购例子: VSGL/B/4/D/G

Description of operation Model VSGL Metering Devices 分配器VSGL的运行描述

stage 1 阶段1

Pressurised lubricant is supplied to the metering device via main line I. The control piston (1) starts moving in the direction of arrow A, displacing the lubricant in front of the control piston into the relieved main line II.

加压润滑剂通过主线I供给计量装置。控制活塞(1)开始向箭头A方向运动，将控制活塞前面的润滑剂排到被释放的主线II中。

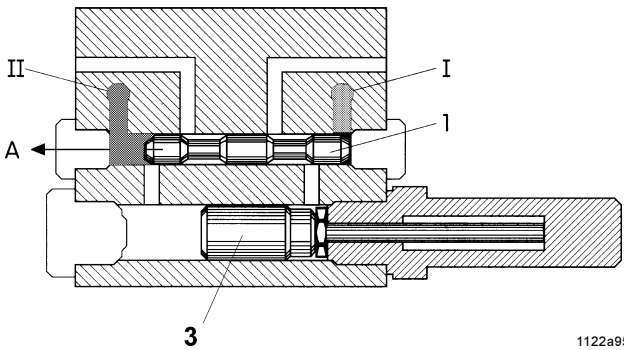


Fig. 1

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stage 2 阶段2

when the control piston (1) uncovers the connecting passage (2) lubricant is transferred to the right end of the dispensing piston (3), thereby displacing it to the left in the direction of arrow A.

The lubricant volume ahead of the dispensing piston is transferred via the connection passage (4) to the lubrication point. with the dispensing piston in its terminal position, the pressure in main line I will continue to rise to reach the preset change-over pressure of the two-line system. At this stage, the change-over valve of the system operates to connect main line I which has so far been under pressure to the lubricant reservoir of the lubrication pump and the lubricant in main line I is depressurized.

当控制活塞(1)揭开连接通道(2)时，润滑油转移到点胶活塞(3)的右端，从而使其沿箭头a方向向左位移。分配活塞前面的润滑剂体积通过连接通道(4)转移到润滑点。随着点胶活塞处于末端位置，主线I的压力将继续上升，达到两线系统预设的切换压力。在这个阶段，系统的切换阀将一直处于压力下的主线I连接到润滑泵的润滑油储液器，主线I中的润滑油被减压。

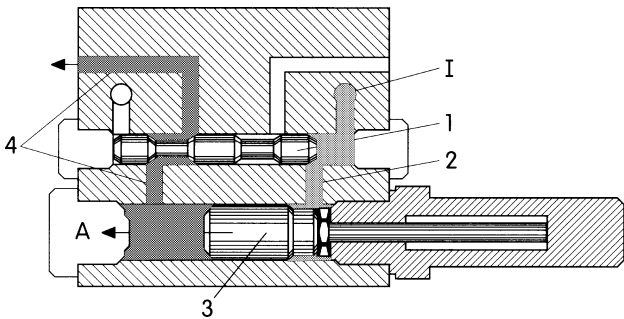


Fig. 2

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stage 3 阶段3

At the same time the change-over valve connects main line II to the lubrication pump, thus pressurizing the lubricant in this main line. The control piston (1) moves in the direction of arrow B, displacing the lubricant ahead of the control piston into the relieved main line I.

同时，转换阀将主管路II连接到润滑泵，从而对主管路中的润滑剂施加压力。控制活塞(1)沿箭头B方向移动，将控制活塞前面的润滑剂排入释放的主线I中。

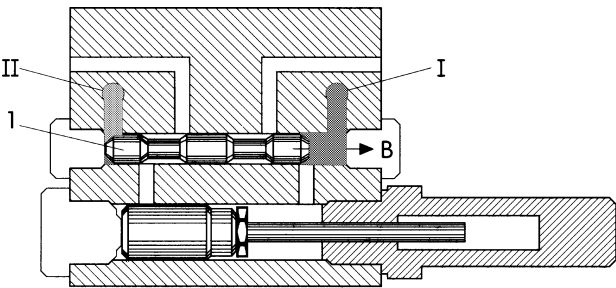


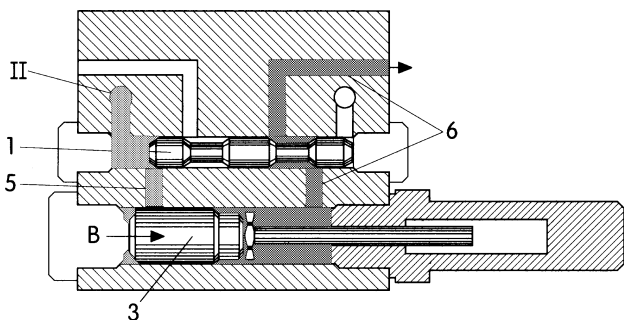
Fig. 3

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stage 4 阶段4

when the control piston (1) uncovers the connecting passage (5) lubricant is transferred to the left end of the dispensing piston (3) and displaces it to the right in the direction of arrow B. The lubricant ahead of the dispensing piston (3) is transferred via the connecting passage (6) to the lubrication point. with the dispensing piston (3) in its terminal position, the pressure in main line II will continue to rise to reach the preset change-over pressure of the two-line system. At this stage, the change-over valve will once again cause a pressure changing-over in main lines I and II and the cycle will be repeated as described in stage 1.

当控制活塞(1)揭示连接通道(5)润滑剂转移到左边的活塞(3)和取代它向右的方向箭头b.配药的润滑剂在活塞(3)通过连接通道是反式-转让(6)润滑点。随着点胶活塞(3)在末端位置，主线II的压力将继续上升，达到两线系统预设的转换压力。在这一阶段，转换阀将再次引起主管线I和II的压力重新转换，并将重复第1阶段所述的循环。



Model VSGL Metering Devices VSGL分配器

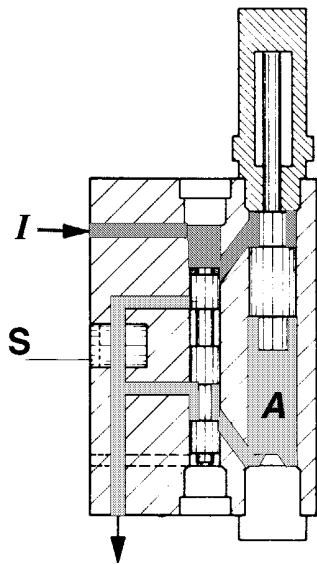


Fig. 5

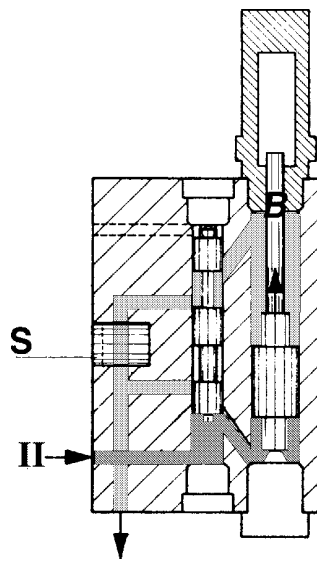


Fig. 6

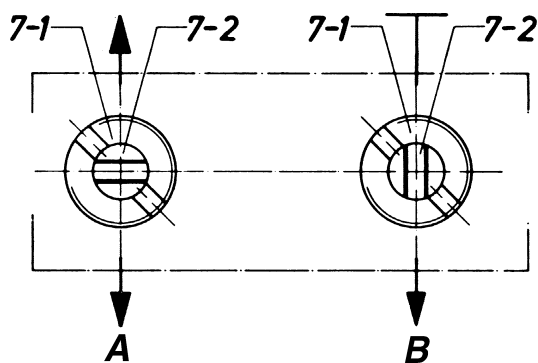


Fig. 7

Cross-porting of outlets

This feature enables one outlet only of a pair of outlets to be used, and provides double the lubricant volume output per lubrication cycle.

该功能允许使用一对出口中的一个出口，每个润滑周期提供两倍的润滑油量输出。

Figure 5 shows stage 2 and figure 6 shows stage 4 of the operation cycle with this feature operative. All models of the series VsG and VsL are equipped with a lockable rotary slide for each pair of outlets.

图5显示了阶段2，图6显示了使用该特性操作的操作周期的阶段4。VsG和VsL系列的所有型号都配有可锁定的旋转滑道，用于每对出口。

Position of cross-porting rotary slide 交叉输送旋转滑道的位置

7-1 lock screw 锁紧螺丝

7-2 rotary slide horizontal: 2 outlets 水平旋转滑道:2个出口

rotary slide vertical: 1 outlet 旋转滑道垂直:1出口

with the two main lines being relieved (i.e. when the pump is switched off) the lock screw 7-1 can be loosened and the rotary slide 7-2 can be turned through 90°. If the rotary slide is put into position A the connecting passage between the two outlets is closed, and the lubricant is discharged by the two outlets. If the rotary slide is in position B, the connecting passage is open. In this case one of the two outlets has to be closed by means of a closure plug, and then the double lubricant volume is discharged by the other outlet (Table 1).

随着两条主线的解除(即当泵开关时)，锁紧螺钉7-1可以松开，旋转滑块7-2可以转动到90°。如果将旋转滑块置于A位置，则关闭两个出口之间的连接通道，润滑油由两个出口排出。如果旋转滑块在B位置，则连接通道是打开的。在这种情况下，两个出口中的一个必须通过封闭塞关闭，然后双润滑剂的体积由另一个出口排出(表1)。

Adjustment of the output Volume 调整输出排量

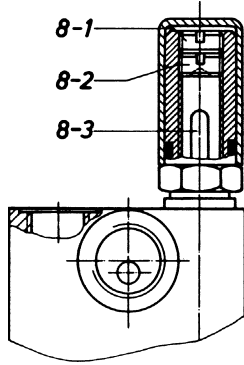


Fig. 8

Variation KR for infinitely variable adjustment and visual indication 可变KR, 无级调节, 可视指示

Infinitely variable adjustment of lubricant output is achieved by turning the adjustment screw 8-2. Maximum output is available if the lock screw 8-1 and the adjustment screw 8-2 are in their uppermost position. By turning the screw downward the output can be continuously reduced. With the two screws in their fully closed position, the indicator pin 8-3 is completely restrained and, because the pin is attached directly to the dispensing piston, the lubricant output will be nearly zero.

The indicator pin shows the correct functioning of a pair of outlets. After setting the lubricant output, the adjustment screw 8-2 will be locked in position by means of screw 8-1.

通过转动调节螺杆8-2实现润滑油输出的无限大调节。如果锁紧螺丝8-1和调节螺丝8-2在最上面的位置, 则可以获得最大的输出。通过将螺杆向下转动, 可以连续减少输出。当两个螺丝处于完全关闭的位置时, 指示灯销8-3被完全抑制, 因为销直接附在点胶活塞上, 润滑剂的输出将接近于零。指示引脚显示一对出口的正确功能。设定润滑油输出后, 调节螺丝8-2通过螺丝8-1锁定到位。

CAUTION
注意

To secure the setting, lock the adjusting screw only when the indicator pin is retracted.若要紧固设置, 请在指示灯销收回时锁定调节螺钉。

Adjustment of the output volume: VSGL-KR, 输出量调整: VSGL-KR

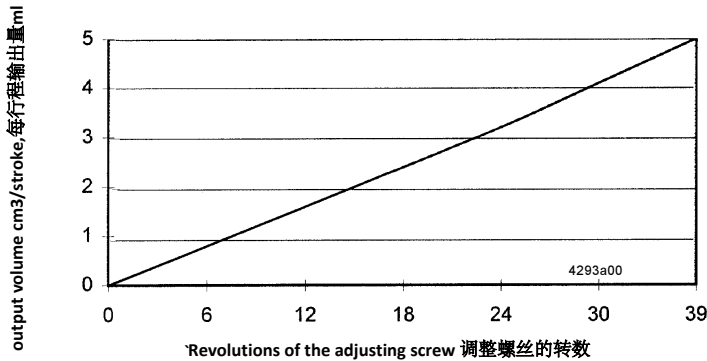


Fig. 9

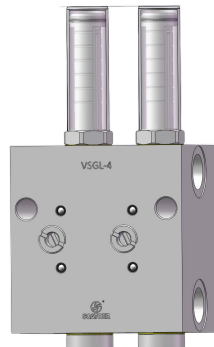


Fig. 10

D and KD variants for graded adjustment of the output volume D和KD变量对输出量进行分级调整

All metering devices of the VSGL series can also be supplied with metering screws version D (fig. 9) or with metering screws and indicator pin for visual indication as version KD (fig. 10). The interchangeable metering screws limit the stroke of the delivery piston. The longer the metering screw is, the smaller the output volume will be. For each series there are four metering screws (table 2) which must be ordered separately. The metering devices are supplied with metering screws for the maximum output delivery if no other specification is mentioned on ordering. The D variant is recommended for extreme conditions of operation: high temperatures or aggressive media. VSGL系列的所有计量装置也可以提供D版本的计量螺钉(图9)或KD版本的计量螺钉和指示针(图10)。可互换的计量螺钉限制了输送活塞的行程。计量螺杆越长, 输出量越小。每个系列有四个计量螺钉(表2), 必须单独订购。如果订购时没有提到其他规格, 计量装置提供计量螺钉, 以达到最大输出。D型推荐用于极端操作条件: 高温或腐蚀性介质。

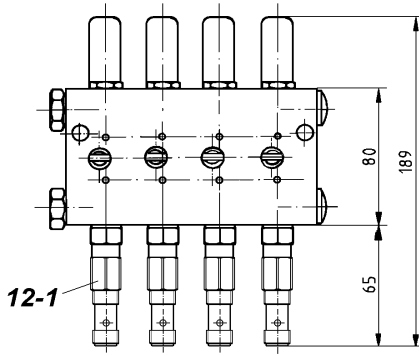


Fig.12

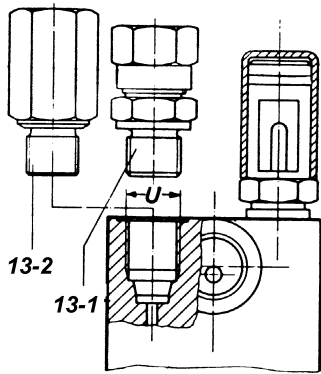
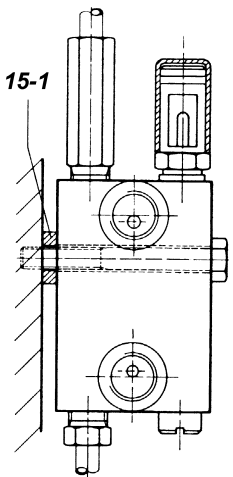
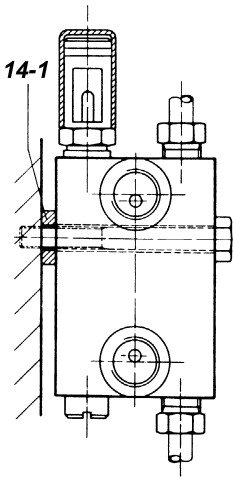


Fig. 13



KR-CP variant

The VSGL metering devices can be supplied with a piston detector (item 12-1) for electronic monitoring.

The proximity switch is activated directly via the respective delivery piston, without contact and wear.

The minimum output volume is 0.4 cm³ for this version.

VSGL计量装置可以提供一个活塞检测器(项目12-1)的电子监测。接近开关通过各自的输送活塞直接激活,没有接触和磨损。
这个版本的最小输出量是0.4 cm³。

For feed lines in every length, use the screw-type couplings with cutting ring 13-1 which can be completed with the adapter 13-2 in case of difficult conditions of assembly (table 3). These couplings make it possible to connect the feed lines and the branch lines from both main lines to the VsG and VsL metering devices.

对于每个长度的馈线,使用带切割环13-1的螺式联轴器,在装配困难的情况下,该联轴器可以与适配器13-2一起完成(表3)。这些联轴器可以将两条主线的馈线和分支线连接到VsG和VsL计量装置。

Check valves for VSGL metering devices 用于VSGL分配器的止回阀

In case of high counter-pressures it is recommended to install check valves in the metering device outlets (table 5).

These are found for example in download progressive metering devices.

对于高反压力的情况,建议在计量装置出口安装止回阀(表5)。

例如,在下载渐进式计量装置中可以找到这些。

Installation of Vs metering devices 分配器安装

All metering devices may be mounted in any position, so that the indicator pins may point upward, downward, to the right or to the left. To simplify the illustration, fig. 14 and 15 only show the indicator pin pointing upward.

所有的计量装置可以安装在任何位置,以便指示销可以指向向上,向下,向右或向左。为了简化说明,图14和图15只显示指示针向上。

The metering devices can further be installed in such a way that the outlets are in front of the indicator pin (fig. 14) or behind it (fig. 15). The installation shown on fig. 15 has the advantage that the indicator pins cannot be partially covered by the feed lines.

计量装置还可以安装在指示销的前面(图14)或后面(图15)。图15所示的安装具有指示销不能被馈线部分覆盖的优点。

The difficulty of connecting the tube lines with this arrangement can be avoided by using the adapters 13-2 (table 3).

通过使用适配器13-2(表3),可以避免用这种排列方式连接管路的困难。

Possible distortions of the metering devices can be avoided by using flexible spacers (14-1 and 15-1). These spacers ensure trouble-free operation of the metering devices even when they are installed on uneven surfaces (table 4).

通过使用柔性垫片(14-1和15-1),可以避免计量装置可能发生的变形。这些垫片确保计量装置无故障运行,即使它们安装在不平整的表面上(表4)。

The Vs metering devices with fitted limit switch must in addition be installed with spacers.

装有限位开关的Vs计量装置还必须安装垫片。

Moreover, it is recommended to install them with the feed lines ahead of the limit switches and thus ahead of the indicator pins.

此外,建议将它们安装在限位开关之前的馈线上,从而位于指示管脚之前。

Accessories 附件

Table 1:
closure plugs for metering devices with 1 outlet per adjustment 计量装置的关闭插头，每次调整有一个出口

Series 系列	Thread 螺纹	Code
VSGL	G1/4	6003128

Table 2:
Metering screws for KD and D variants . to fig. 9 and 10 计量螺钉KD和D型。图9和图10

Series 系列	Marked volumes cm3/stroke 每次标记排量	Code
VSGL	1.50	6003149*2
	3.00	6003136+6003149
	4.50	6003136*2

Table 5:
check valves for outlets 出口单向阀

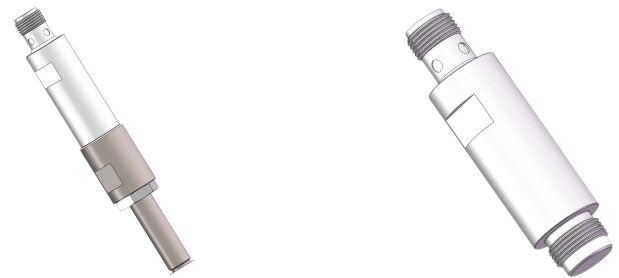
Tube DIA	Designation	Code
6mm	GERV 6 - S G 1/4A Vc	5011017
8mm	GERV 8 - L G 1/4A Vc	5011016
10mm	GERV 10 -L G 1/4A Vc	5011008

Table 3:
Adapter for male connectors. to fig 13 (13 - 2) 转换接头。图13 (13 - 2)

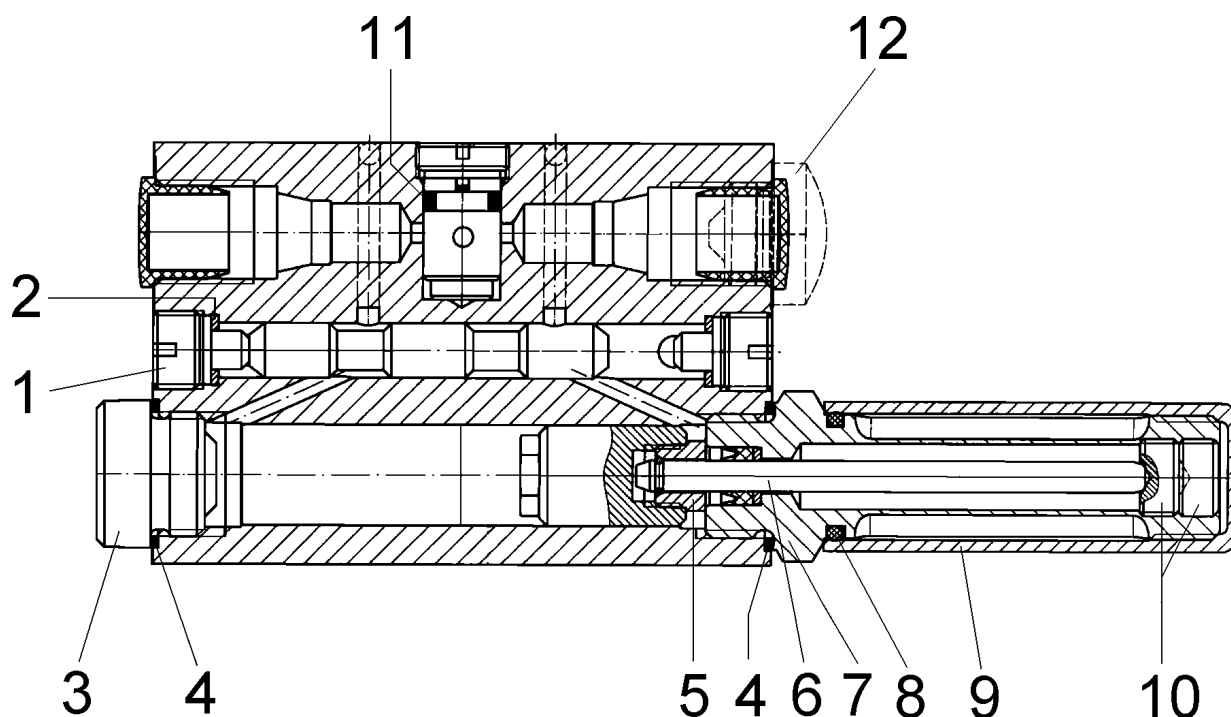
Metering device	Code
R1/4m - R1/4f	5206533

Table 4:
Piston detection sensor 活塞检测传感器

	Code
TURRET SIDE 指示杆侧	6057902
TURRET OPPOSITE SIDE 指示杆对侧	6057908



VSGL-KR spare Parts List VSGL-KR分配器备品备件清单



- | | | |
|----|---|-------------|
| 1 | closure plug M10 x 1 控制活塞堵头 | 303-17404-1 |
| 2 | copper washer 5 x 9 x 1 紫铜垫片 | 209-12158-8 |
| 3 | closure plug M16 计量活塞堵头 | 303-17515-1 |
| 4 | copper washer 13.5 x 16 x 1 紫铜垫片 | 306-17827-1 |
| 5 | Holding screw M8 x 1 固定螺栓 | 420-22350-1 |
| 6 | Indicator pin assy. 指示杆 | 520-32066-1 |
| 7 | Adjusting sleeve with U-cup sealing ring FKM (Viton,standard) | |
| 8 | o-ring 12 x 2 O型圈 | |
| 9 | Protection cap 保护罩 | |
| 10 | screw ring M 10 x 1.5 锁紧螺丝 | |
| 11 | o-ring 6 x 2 O型圈(Viton,standard) | |
| 12 | closure plug 堵头 | |

