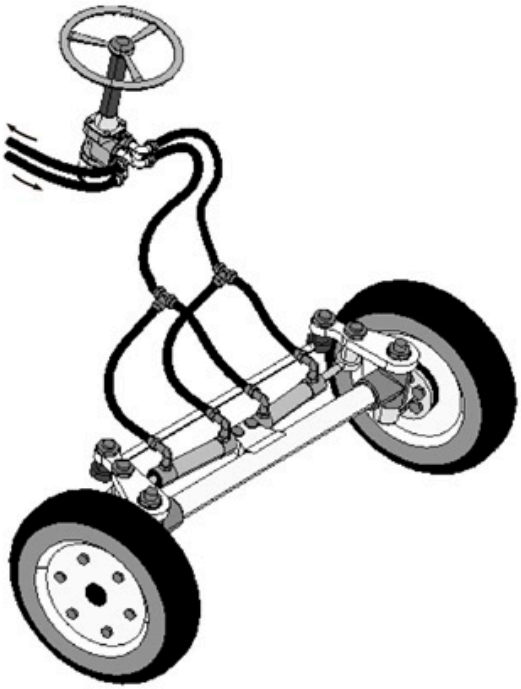




全液压转向器广泛用于工程车辆转向和船舶操舵。驾驶人员通过它可以用较小的操纵力，实现较大的转向力控制，并且在性能上安全、可靠，操纵上轻便、灵活。

BZZ1、BZZ2、BZZ3系列全液压转向器具有下列特点：

消除机械式连动装置，可降低主机成本，提供可靠轻便的结构；

操作灵活省力；

在发动机熄火时，可实现应急人力转向；

可用很小的力矩进行连续无级控制转动；

提供给控制回路以及主机尺寸广泛的选择面；

能和多种转向油泵及液压转向系统连接。

BZZ5系列负荷传感全液压转向器除具有上述特点外，还具备下述特点：

无论负荷压力大小、方向盘转速快慢，均能按转向油路要求，优先分配相应流量，保证转向可靠、灵敏、轻便；

油泵输出的流量，除向转向系统供给所需的流量外，剩余部分可供给辅助油路使用，从而消除转向油路供油过多而造成的功率损失，提高了系统效率。

Hydraulic steering control unit(SCU) is widely used both in the steering system of vehicles and the marine rudder. The operator can obtain bigger steering control force with less steering force, and its function is more safety and reliable, its operation is more smooth and flexible.BZZ1,BZZ2,BZZ3 series SCU offers the advantages as follows:

This kind of SCU series can help you reduce the machinery cost without mechanical linkage device, and can offer reliable and light structure.

This kind of SCU series can operate more flexible with light steering torque.

This kind of SCU series can offer emergent manual steering in case of engine failure.

This kind of SCU series can be steering at the continuous speed with less steering torque.

This kind of SCU series can offer various hydraulic system and different mounting choice.

This kind of SCU series can link various steering pump and hydraulic steering system.

In addition to the advantages mentioned above, BZZ5 series SCU has the features as follows:

BZZ5 series SCU can supply priority relative flow to ensure reliable , sensitive and flexible steering according to the requirement of hydraulic steering system, whether the load pressure is big or small, or the steering wheel rotates quick or slow.

In addition to the necessary flow supply to the steering system, the remaining flow out of the pump can be supplied to subsidiary flow system , so that the system can avoid the power loss caused by surplus flow out of the steering flow system, and the system efficiency can be increased.

通用资料 General Description

BZZ 系列转向器的功能 BZZ Series Function	BZZ系列全液压转向器由一对旋转阀组和一对转定子啮合副组成。通过转向柱使转向器连接到车辆的方向盘上，当方向盘转动时，从转向系统供油泵来的油经旋转阀和转定子副流到油缸的左或右腔(取决于转动方向)。 转定子副排出的油与方向盘的转角成正比。如果从转向系统供油泵来的油太少，该转向器则可当手动泵看待。 BZZ series hydraulic steering unit is consisted of one pair of rotary valve and one pair of gerotor. Via the steering column, the steering unit links the steering wheel, when the steering wheel rotates, the oil flows out of the supply pump of the steering system , through the rotary valve and the gerotor , to the cylinder's port left or right (depend upon the rotation direction). The gerotor supplies the oil to the steering cylinder in proportion to the angular rotation of the steering wheel. If the oil flow out of the supply pump of the steering system is too small, the steering unit can work as the manual pump.
开芯系统 In open center system	释放方向盘，转向器中的旋转阀处于中位时，油泵和油箱之间是连通的。在中位开芯型转向系统中，一般使用定量油泵。 Release the steering wheel, the rotary valve stays in the neutral position, the pump and the tank is linked in open circuit. The constant pump is normally used in the open center steering system when the valve stays in the neutral position.
闭芯系统 In closed center system	释放方向盘，转向器中的旋转阀处于中位时，转向器的进油端是关闭的。在中位闭芯型转向系统中，一般使用变量油泵。 Release the steering wheel, the rotary valve stays in the neutral position,the input port is closed.the variable pump is normally used in the close center steering system when the valve stays in the neutral position.
对转向柱的配备要求 Technical requirement for steering column	转向柱的结构必须能保证不传递轴向负载到转向器的输入轴上，安装转向柱时应该使转向器在完成操纵动作以后，能自动回到中位位置。 The structure of the steering column must ensure not to transfer the axial load to the output shaft of the steering unit. While the steering column is mounted, the steering unit should be able to return to the neutral position after its steering operation.
转向柱上的操纵力 Steering torque of the steering column	在正常操纵条件下，动力单元的油泵供给足够的液压油，方向盘的最大输入扭矩不会超过5N·m，如果动力单元的供油泵不能供油或供油量太少，转向器将自动切换成手动泵，在手动转向(即人力转向)状态下，方向盘的输入扭矩将会明显大于5N·m，但最大输入扭矩请勿大于120N·m，否则将会导致转向器内部部分零件损坏。 Under the normal steering, the pump of the power unit supply enough oil , the max. torque of the steering wheel is no more than 5 N.m. If the pump fails to supply oil or supply insufficient oil, hydraulic steering unit will automatically change into manual steering.Under manual steering, the steering torque is obviously more than 5 N.m. However the max. torque cant be bigger than 120 N.m. or it will cause some damages inside the parts of steering unit.

型号说明 Order Code

BZZ □ — E □ □ □ — □ □

其他要求 (见P4表格，LS油口特殊代码见P11表格)
Code for other requirements(see the table on Page 4; see the table of LS special port code on page 11)

油口代码（见P4、P11页表格）
Ports code (see the table on Page 4 and Page 11)

特征标识
Code for special characteristics(see the table on Page 4)

连接型式
Mounting Data

- A:长止口十字块连接 A:Long spigot, cross-block mounting
- B:SAE 渐开线花键连接 B:SAE involute spline mounting
- C:短止口十字块连接 C:Short spigot, cross-block mounting

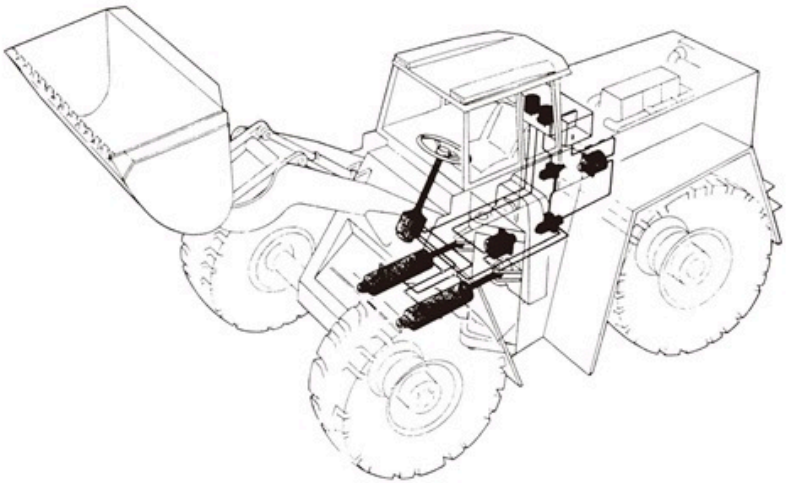
排量 Displacement

压力等级 Pressure grade 16MPa

功能符号
Function Code

- 1:开芯无反应型 1:Open center non-reaction
- 2:开芯有反应型 2:Open center reaction
- 3:闭芯无反应型 3:Closed center non-reaction
- 5:负荷传感型 5:Load sensing

摆线转阀式全液压转向器
Cycloid Rotary Valve Hydraulic Steering Units



类别 Category	符号 Code	含义 Definition	备注 Remark	
特征标识 Characteristic Code	（缺省） （omit）	普通型 Common Type	适合各类转向系统，例如：拖拉机、装载机、压路机等。 Fit various steering system, e.g. tractor, loader, and road roller, etc. mainly used in china.	
	D	输入扭矩：Input torque 1.6N·m～2.4 N·m	适合平坦路面的转向系统，例如：叉车。 fit steering system of vehicles that driving on flat road , such as forklift.	
	C	输入扭矩：Input torque ≤1.6N·m		
	其他性能特征要求的标识（协议确定） Codes for the requirement of other performance characteristics (should be confirmed in an agreement)		例如：人力转向、终点感、噪音、回位性能等方面，或综合要求。 e.g. manual steering, lower terminal steering feeling, noise and back-to-the-neutral-position function etc., or comprehensive requirement.	
油口代码 Ports Code	代码 Code	P、T、A、B油口 Ports P,T,A,B	连接螺纹C Column Mounting C	连接螺纹V Valve Mounting V
	（缺省） （omit）	M20×1.5	M10	M12
	A	M18×1.5	M10	M12
	B	G1/2	M10	M10×1
	C	3/4-16UNF O-ring	3/8-16UNC	3/8-24UNF
	D	M20×1.5 O-ring	M10	M12
	E	M18×1.5 O-ring	M10	M12
	G	M22×1.5	M10	M12
	Q	M22×1.5 O-ring	M10	M12
	U	G1/2 O-ring	M10	M10×1
	M	3/4-16UNF O-ring	M10	M12
	I	3/4-16UNF O-ring	M10	M10
	N	3/4-16UNF O-ring	M10×1.25	M10
	R	P,T：M22×1.5 A,B：M18×1.5	M10	M12
	S	P,T：M22×1.5 O-ring A,B：M18×1.5 O-ring	M10	M12
其他要求 Other Requirements	主要指协议规定的外观、油漆颜色等方面，协议确定代码。 Mainly refers to the appearance, paint color etc. specified by agreement; the code will be listed in the agreement.			

注1：油口P、T、A、B的深度16 mm，连接螺纹C、V的深度16 mm。

Note 1: Ports P,T,A,B Depth : 16 mm; Column Mounting C & V Depth: 16 mm.