

# YSF 系列 $\Phi 80$ - $\Phi 130$ 压力释放阀

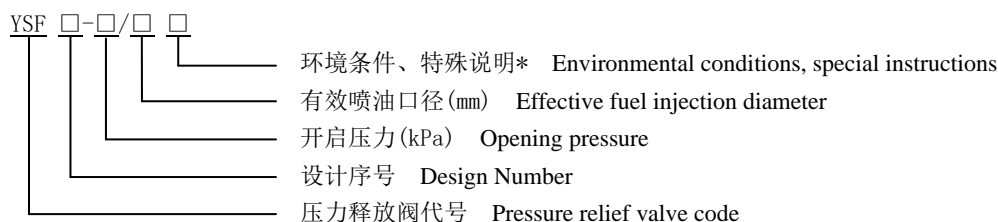
## YSF series pressure relief valve with a diameter of 80 to 130

### 一. 简介、型号、规格、结构、特点 Introduction, model, specifications, structure, and features

$\Phi 80$ mm、 $\Phi 130$ mm 口径的压力释放阀，主要适用于大型油浸式电力变压器、电力电容器、电抗器等设备油箱内部压力超压时的压力释放。除带常规电气报警信号外，还可增设计算机用电气报警信号功能，即可实现双路电气信号输出，且各自独立分别引出，用户可在订购产品时根据需要选取。

Pressure relief valves with diameters of  $\Phi 80$ mm and  $\Phi 130$ mm are mainly suitable for releasing pressure inside oil tanks of large oil immersed power transformers, power capacitors, reactors, and other equipment when the pressure exceeds the limit. In addition to the conventional electrical alarm signal, a computer electrical alarm signal function can also be added to achieve dual electrical signal output, and each can be independently led out. Users can choose according to their needs when ordering products.

### 1.1 型号及说明 Model and Description



**\*说明:** YSF-表示压力释放阀, K-表示带单电气信号, SK-表示带双路电气信号, J-表示带机械信号, TH-表示用于湿热地区, B-表示带闭锁装置。

**\*Description:** YSF- indicates the pressure relief valve, K- indicates a single electrical signal, SK- indicates a dual electrical signal, J- indicates a mechanical signal, TH- indicates a wet tropical region, and B- indicates a locking device.

**标注实例:** YSF9-55/130DSKJTHB 即为第九次设计, 开启压力为 55KPa, 喷油口径为  $\Phi 130$ mm, 带定向喷油, 带双路电气报警信号, 带机械报警装置, 湿热地区用, 带闭锁装置的压力释放阀。

**Example annotation:** YSF9-55/130DSKJTHB is the ninth design, with an opening pressure of 55KPa, an injection diameter of  $\Phi 130$ mm, directional injection, dual electrical alarm signals, mechanical alarm devices, used in humid and hot areas, and a pressure relief valve with a locking device.

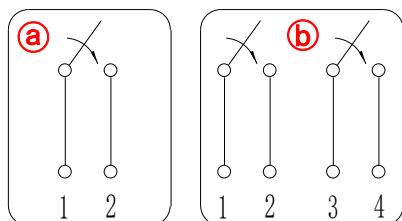
### 使用范围:

(a). 安装位置: 油箱盖上、升高座上或油箱上部侧壁上; (b). 环境温度:  $-30^{\circ}\text{C}\sim+70^{\circ}\text{C}$  (可根据用户需求定制最高可支持  $-45^{\circ}\text{C}\sim+70^{\circ}\text{C}$ ), 工作环境要求:  $-30^{\circ}\text{C}\sim+115^{\circ}\text{C}$  (可根据用户需求定制最高可支持  $-45^{\circ}\text{C}\sim+115^{\circ}\text{C}$ ); (c). 相对湿度:  $+20^{\circ}\text{C}$ 时, 不大于 95%; (d). 防护等级: IP55 (可根据用户需求定制)。适用范围: 海拔 0~4000m; (e). 工频耐压: 常开接点 2000V, 1min, 常闭接点或单刀双掷接点: 相间 1000V, 1min, 对地 2000V, 1min; (f). 绝缘性能: 常开接点 2500V, 1000M $\Omega$ , 常闭接点或单刀双掷接点: 相间 1000V, 500M $\Omega$ , 对地 2500V, 1000M $\Omega$ 。

### Scope of use:

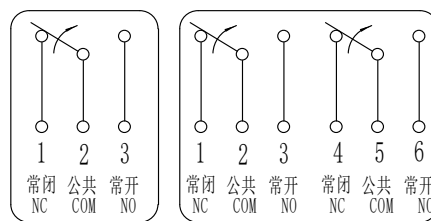
(a) Installation position: on the fuel tank cap, on the raised seat, or on the upper side wall of the fuel tank; (b) Environmental requirements:  $-30^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$  (can be customized according to user needs to support up to  $-45^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ ); Work environment requirements:  $-30^{\circ}\text{C}\sim+115^{\circ}\text{C}$  (customizable according to user needs, can support up to  $-45^{\circ}\text{C}\sim+115^{\circ}\text{C}$ ); (c) Relative humidity: not exceeding 95% at  $+20^{\circ}\text{C}$ ; (d) Protection level: IP55 (Customizable according to user requirements). Scope of application: Altitude 0~4000m.; (e) Power frequency withstand voltage: normally open contact 2000V, 1min, normally closed contact or single pole double throw contact: phase to phase 1000V, 1min, ground 2000V, 1min; (f) Insulation performance: normally open contact 2500V, 1000M  $\Omega$ , normally closed contact or single pole double throw contact: phase to phase 1000V, 500M  $\Omega$ , ground 2500V, 1000M  $\Omega$ .

### 1.2 信号开关接线图及电气参数: Signal switch wiring diagram and electrical parameters:



**图 1** 二芯常开单接点、四芯双常开接点压力释放阀接线原理图(注: 无特殊说明单接点用:图 1(a)、双接点用:图 1(b))

Figure 1 Schematic diagram of pressure relief valve wiring for two core normally open single contact and four core double normally open contact (note: unless otherwise specified, for single contact: Figure 1 (a), for double contact: Figure 1 (b))



**图 2** 三芯常开常闭单接点、六芯常开常闭双接点压力释放阀接线原理图

Figure 2 Schematic diagram of wiring for three core normally open and normally closed single contact and six core normally open and normally closed double contact pressure relief valves

**表 1 信号开关基本参数(带电气接点的压力释放阀)**

Table 1 Basic Parameters of Signal Switch (Pressure Relief Valve with Electrical Contact)

电源种类 Type of power supply	电压(V) Voltage	电流 A Electric current	
		电阻负载 Resistive load	感性负载 Inductive
AC	220V	5	3(cos φ =0.4)
DC		0.3	0.05(T=7ms)

重点说明: 型号名称不同, 产品及其安装尺寸相同的说明!!!

Key note: Different model names may result in the same product and its installation dimensions-

-表 2- -Table 2-

型号 Model	YSF9-XX/80(130) DKJTHB	等同于 Equal to	YSF8-XX/80(130) KJTHB	YSF9-XX/80(130) KJTHB	等同于 Equal to	YSF4-XX/80(130) KJTHB
	YSF9-XX/80(130) DSKJTHB	等同于 Equal to	YSF8-XX/80(130) KKJTHB	YSF9-XX/80(130) SKJTHB	等同于 Equal to	YSF4-XX/80(130) KKJTHB

## 2.2、性能参数 (参见表 3) Performance parameters (see Table 3)

单位 Unit: mm

-表 3- -Table 3-

有效口径 (mm) Effective caliber	Φ80			Φ130				
开启压力 (kPa) Opening pressure	35	55	85	55	70	85	100	138
极限偏差 (kPa) limit deviation	±5							±10
关闭压力 (kPa) Closing pressure	19	29.5	45.5	29.5	37.5	45.5	54	74
密封压力 (kPa) Sealing pressure	21	33	51	33	42	51	60	82.8

## 2.3 外形及安装尺寸图 Outline and installation dimension diagram

2.3.1、喷油口径为 Φ80、Φ130 带电气信号不带定向喷油, 螺栓联接压力释放阀见图 3、表 4;

The fuel injection diameter is Ø 80 and Ø 130 with electrical signal but without directional injection. The pressure relief valve is connected by bolts as shown in Figure 3 and Table 4;

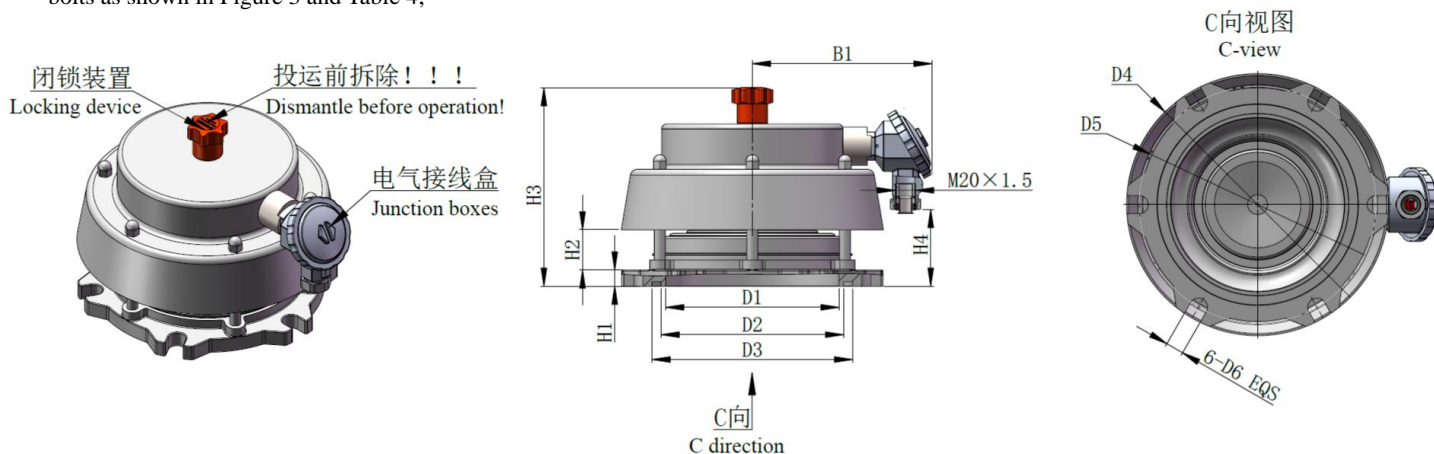

**图3 YSF9型不带定向喷油压力释放阀外形图**

Figure 3 Outline drawing of YSF9 type without directional injection pressure relief valve

单位 Unit: mm

-表 4- -Table 4-

规格 Specifications	D1	D2	D3	D4	D5	D6	H1	H2	H3	H4	B1
YSF9-XX/80 (S)KJTHB	122	132	151	200	170	14	16	40	200	70	162
YSF9-XX/130 (S)KJTHB	172	188	208	260	235	18	17	55	215	85	180

2.3.2、喷油口径为  $\Phi 80$ 、 $\Phi 130$  带电气信号且带定向喷油，螺栓联接压力释放阀见图 4、表 5；

The fuel injection diameter is  $\Phi 80$  and  $\Phi 130$ , with electrical signals and directional injection. The pressure relief valve is connected by bolts as shown in Figure 4 and Table 5;

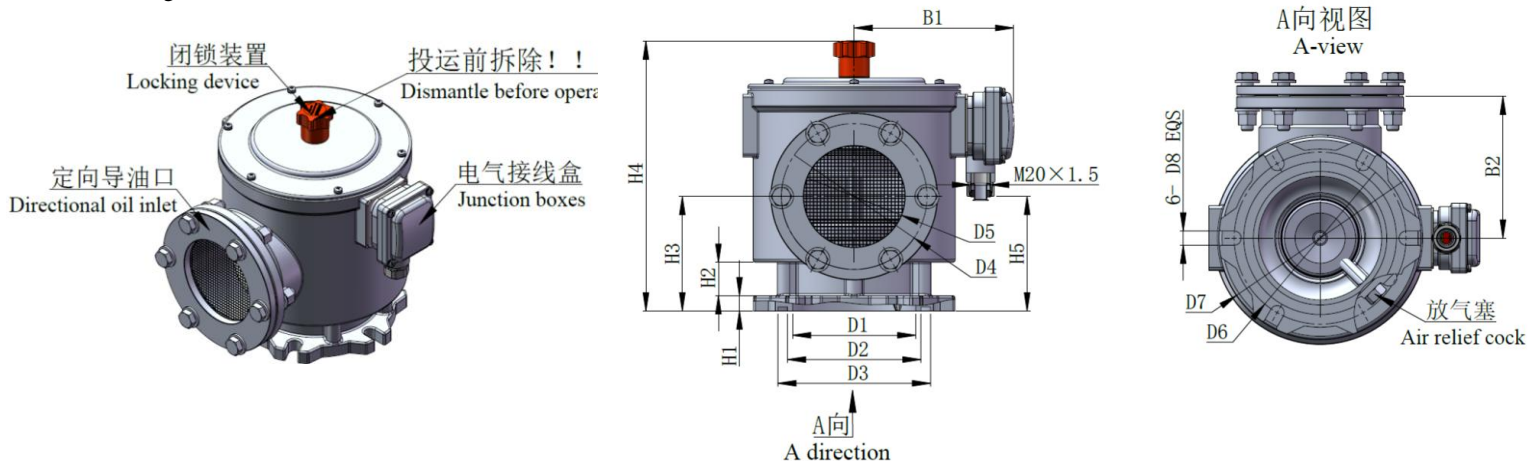


图 4 YSF9 型定向喷油压力释放阀外形图

Figure 4 Outline drawing of YSF9 directional injection pressure relief valve

单位 Unit: mm

-表 5- -Table 5-

规格 Specifications	D1	D2	D3	D4	D5	D6	D7	D8	H1	H2	H3	H4	H5	B1	B2
YSF9-XX/80 D(S)KJTHB	122	132	151	144	100	170	200	14	15	33	113	265	105	160	140
YSF9-XX/130 D(S)KJTHB	180	188	208	200	148	235	260	18	16	33	131	288	120	186	175

2.3.3、喷油口径为  $\Phi 80$ 、 $\Phi 130$  带电气信号且带定向喷油，螺栓联接压力释放阀(8孔)见图 5、表 6；

The fuel injection diameter is  $\Phi 80$  and  $\Phi 130$ , with electrical signals and directional injection. The pressure relief valve (8-hole) is connected by bolts as shown in Figure 5 and Table 6;

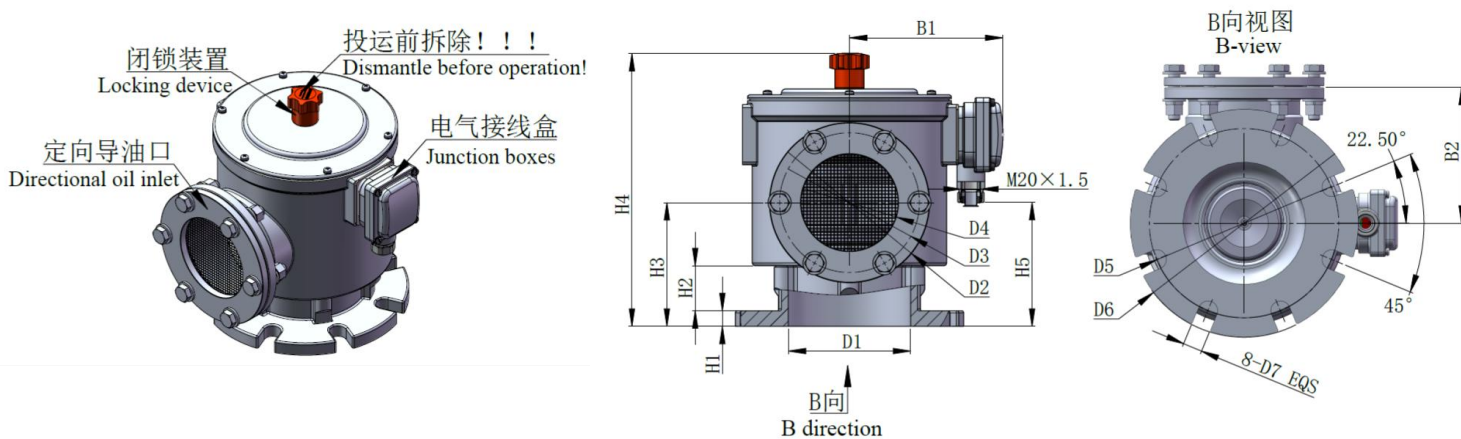


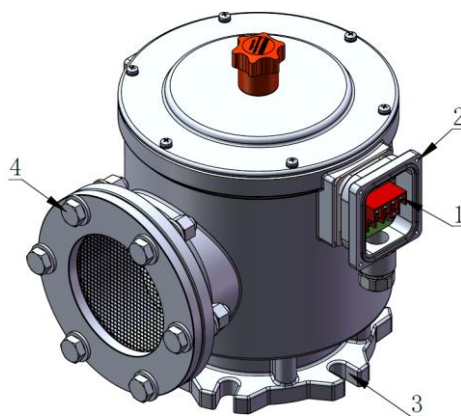
图 5 YSF10 型定向喷油压力释放阀外形图








Figure 5 Outline drawing of YSF10 directional injection pressure relief valve

单位 Unit: mm

-表 6- -Table 6-

规格 Specifications	D1	D2	D3	D4	D5	D6	D7	H1	H2	H3	H4	H5	B1	B2
YSF10-XX/80 D(S)KJTHB	126	165	144	100	195	235	20	16	45	125	285	120	160	140
YSF10-XX/130 D(S)KJTHB	166	225	200	148	240	280	24	17	45	145	307	130	186	175



序号 Number	装配位置 Assembly position		螺纹规格 Thread specification	推荐扭矩 Recommended torque	装配工具规格 Assembly tool specifications		备注 Notes
1	接线端子 Connecting terminal		M3	0.5~1Nm		PH2	建议手动安装 Suggest manual installation
2	接线盒盖 Terminal box cover		M4	1.5~2Nm		PH2	建议手动安装 Suggest manual installation
3	法兰安装孔 Flange installation hole	YSF9-80	M12 螺栓 bolt	35~40Nm		19mm	
		YSF9-130	M16 螺栓 bolt	65~75Nm		24mm	
		YSF10-80	M16 螺栓 bolt	65~75Nm		24mm	
		YSF10-130	M20 螺栓 bolt	120~135 Nm		30mm	
4	定向导油口 Directional oil inlet		M10	18~22Nm		17mm	

扭矩参考表

Torque Reference Table

本产品提供多种颜色选择，具体描述如下：

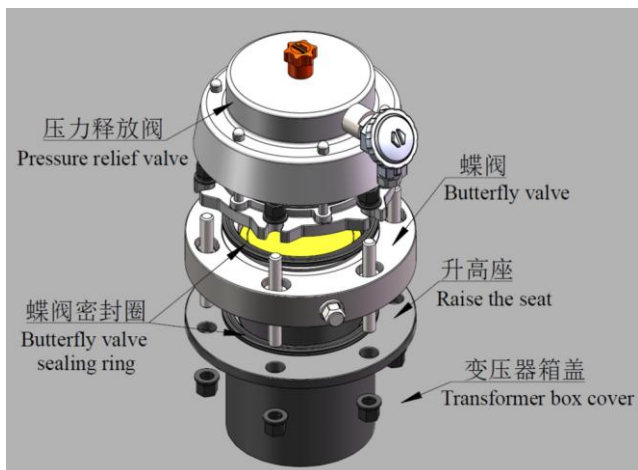
The product provides a variety of color options, specifically described as follows:

色卡编号 Color card No	颜色 Color	可选性 Optionality of choice
RAL7038	玛瑙灰 Agate grey	默认 (Default)
RAL7042	交通灰 A Traffic grey A	可选 (Optional)
RAL7035	浅灰色 Light grey	可选 (Optional)

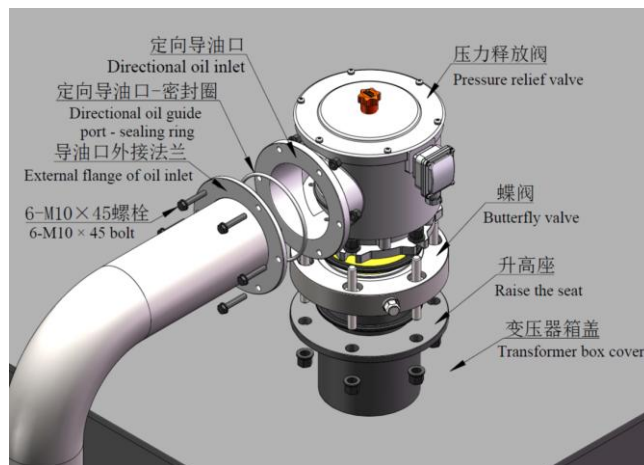
三、安装与使用 **Installment and use**

3.1 YSF9 型不带定向喷油压力释放阀与 YSF9 型定向喷油压力释放阀安装示意图

Installation diagram of YSF9 type without directional injection pressure relief valve and YSF9 type directional injection pressure relief valve



**图 6** YSF9 型不带定向喷油压力释放阀安装示意图  
Figure 6 Installation diagram of YSF9 type without directional injection pressure relief valve



**图 7** YSF9 型定向喷油压力释放阀安装示意图  
Figure 7 Installation diagram of YSF9 directional injection pressure relief valve