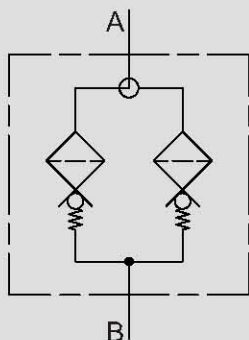


双筒高压过滤器 HFDK

Double Barrel High Pressure Filter HFDK

- 流量至 600 L/min
Maximum Flow Rate 600L/min
- 压力至 315bar
Maximum Pressure 315bar
- 材料GGG/钢
Material: GGG/Steel

液压符号
Hydraulic Symbols



1 技术说明

Technical States

1.1 过滤器壳体

Filter Shell

结构

Structure

过滤器壳体按照国际规定设计，由上盖和筒体组成。标准配置为球式切换和可接污染发讯器的接口。

The filter shell has been designed in accordance with international regulations.

It consists of top cover and barrel. The standard model has a ball change-over valve and a connection for a clogging indicator.

1.2 滤芯

Filter Element

菲思特的原装滤芯确保可靠的功能及保护易污染液压元件和设备免受磨损。按国际标准进行的质量和性能检测确保过滤器能够可靠地运行。

Original FST filter elements guarantee reliable function and protect hydraulic components and systems which are sensitive to contaminate from wear and tear.

Performance and quality tests in accordance with international standards guarantee reliable operation of the filter.

菲思特过滤器符合下列标准：

FST filters are validated according to the following standards:

- DIN ISO 2941
- ISO 3724
- DIN ISO 2942
- ISO 3968
- DIN ISO 2943
- ISO 16889

滤芯的最大允许压差如下：

Filter Element—Maximum Allowable Pressure Differential:

BN3HC: 25bar

BH3HC: 210bar

W/HC: 30bar

1.3 密封

Seals

丁腈橡胶或氟橡胶 NBR or FPM

1.4 特殊形式及附件

SPECIAL MODELS AND ACCESSORIES

-请咨询 Please inquire

1.5 备件

SPARE PARTS

见备件表和维护说明

To see Original Spare Parts List and Maintenance Instructions.

1.6 与介质的相容性DIN ISO 2943:
COMPATIBILITY WITH OPERATING
FLUIDS TO DIN ISO 2943:

- 液压油H至HLPD DIN51524
Hydraulic oils H to HLPD to DIN51524
- 润滑油DIN51517, APJ,ACEA,DIN51515,
ISO6743
Lubrication oils to DIN51517,APJ, ACEA,
DIN51515,ISO6743
- 压缩机油DIN51506
Compressor oils to DIN51506
- 可迅速生物分解的介质VDMA24568,
HETG,HEES,HEPG
Rapidly biodegradable operating fluids to
VDMA 24568 HETG, HEES, HEPG
- 抗燃介质HFC和HFD
Non-flam operating fluids HFC and HFD
- 含水量高的介质请咨询 (含水量>50%)
Operating fluids with high water content
(>50% water content)on request

2 概述
General

- 安装
Mounting
- 管路过滤器
Pipeline Filter
- 温度范围:
Temperature Range:
-10℃~+100℃
- 污染发讯器的设定压力
Pressure Setting of Clogging
Indicator
ΔPa=8bar±10%
- 其他设定压力请咨询
Please inquire for other setting
pressure if needed.

3 型号说明 (订货示例)
Model Code(Order Example)

3.1 过滤器 Filter

HF DK BN/HC 160 Q A G 10 A 1 .X /-V

过滤器型式 Filter Type

滤芯材料 Material of Element

BN/HC-BN3HC

BH/HC-BH3HC

W/HC 不锈钢金属网 Stainless Steel Net

壳体材料/规格 Shell: Material/Spec

GGG: 30、60、110、140、160、240、280、330、500、660、990、1320

工作压力 Working Pressure

Q=315bar

切换形式 Type of change-over

A = 球阀式切换 ball change-over

接口形式/规格 Connection Type/Spec

代号	连接类型	过滤器型号 Filter Model											
Code	Connecting	30	60	110	140	160	240	280	330	500	660	990	1320
B	G 1/2	●											
C	G 3/4		●	●	●								
F	G 1/2					●	●	●					
L	DN 50								●	●	●	●	●
Z		根据用户需要定制 According to customer specification											

过滤精度 μm Filtration Precision (μm)

BN/HC、BH/HC: 3、5、10、20

W/HC: 25、50、100、200

污染发讯器形式 Type of Clogging Indicator

Y 带污染发讯器安装孔 with clogging indicator mounting holes

A 安装孔用锁紧螺栓封闭 mounting holes closed by lock bolt

B 目视发讯器 Visual clogging indicator

C 电气发讯器 Electrical clogging indicator

D 目视/电气发讯器 Combined visual/ electrical clogging indicator

形式代号 Type Number

1 整体式 Single Type

2 分体式 (只适用于规格990和120) Combined Type (only for Spec 990 & 120)

改型代号 Modification Number

X 提供最新型 Newest Version Provided

补充参数 Supplemental Parameters

无参数=标准 (丁腈橡胶密封) No details =standard (NBR seals)

L 相应电压 (24V、220V) with corresponding voltage (24V、220V)

V 氟橡胶密封, 过滤器适用于可迅速分解的油和磷酸酯 (HFD-R)

FPM seal, filter suitable for rapidly biodegradable oil and organic phosphate (HFD-R)

W 丁腈橡胶密封, 过滤器适用于用于油水乳液 (HFA,HFC)

NBR seals, suitable for oil-water emulsions (HFA/HFC)

3.2 滤芯

Filter Element

规格 Spec

0160 D 010 BN3HC /-V

0030、0060、0110、0140、0160、0240、0280、0330、0500、0660、0990、1320

形式 Type

D

过滤精度 μm Filtration Precision (μm)

BN3HC、BH3HC: 3、5、5、10、20

W/HC: 25、50、100、200

滤芯材料 Material of Element

BN3HC、BH3HC、WHC

补充参数 Supplemental Instruction

V=氟橡胶密封, 适用于可迅速分解的介质和磷酸酯 (HFD-R)

FPM seals, element suitable for rapidly biodegradable oils and phosphate ester (HFD-R)

W=丁腈橡胶密封, 适用于油水乳液 (HFA,HFC)(只适用于W/HC, W和V滤芯)

element suitable for oil-water emulsions HFA,HFC(only necessary for V and W/HC elements)

4 过滤器技术参数

Filter-Technical Parameters

过滤器型号 Filter Model	连接类型 Connecting	过滤器型号 Model of element	重量(kg)含滤芯 Weight (kg)
30	G 1/2	1 x 0030 D...	7.4
60	G 3/4	1 x 0060 D...	15.0
110	G 3/4	1 x 0110 D...	17.0
140	G 3/4	1 x 0140 D...	18.9
160	G 1 1/2	1 x 0160 D...	33.0
240	G 1 1/2	1 x 0240 D...	36.0
280	G 1 1/2	1 x 0280 D...	45.0
330	SAE DN 50	1 x 0330 D...	154.0
500	SAE DN 50	1 x 0500 D...	163.0
660	SAE DN 50	1 x 0660 D...	170.0
990	SAE DN 50	1 x 0990 D...	184.4
1320	SAE DN 50	1 x 1320 D...	202.4

4.1 抗疲劳性

FATIGUE STRENGTH

从0至公称压力106交变负荷

Alternate Load 106 cycles from 0 to nominal pressure

5 过滤器规则的确定

Filter Spec Confirmation

特定流量下过滤器的总压降和壳体压降之和。可使用下列提供的过滤器曲线确定压降。另特别说明菲思特过滤器技术资料中的压降是过滤器的总压降, 即包括切换阀。

注意: 我们建议确定过滤器规格时使用最大压降1.6bar (标准发讯器设定压力的20%)。超过该数值请与我们联系以检查流量。

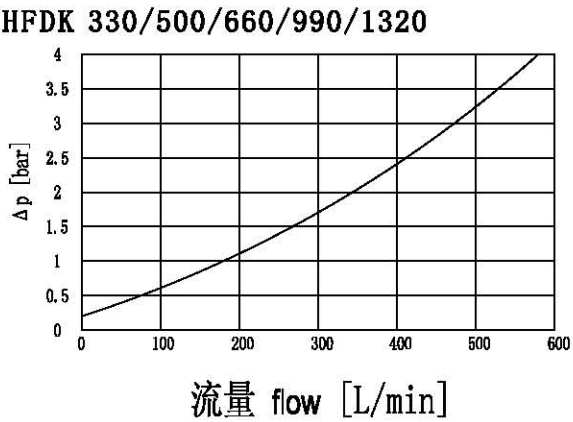
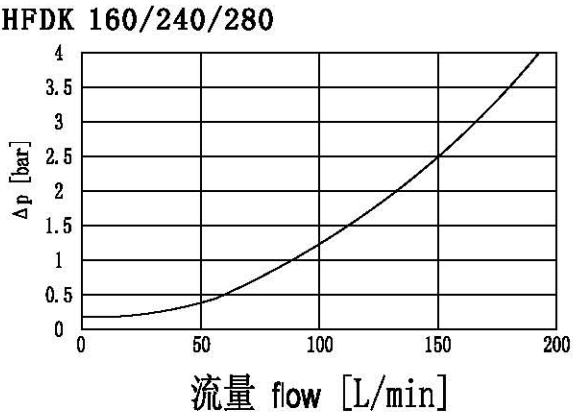
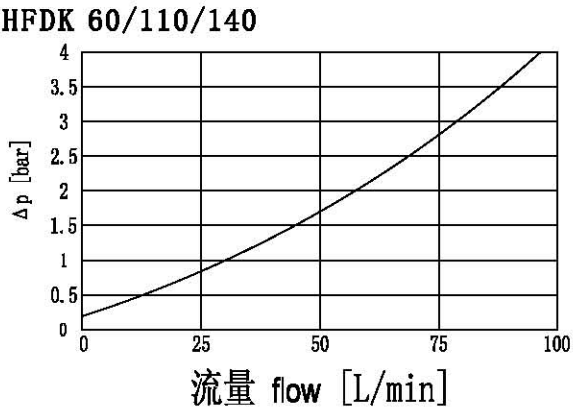
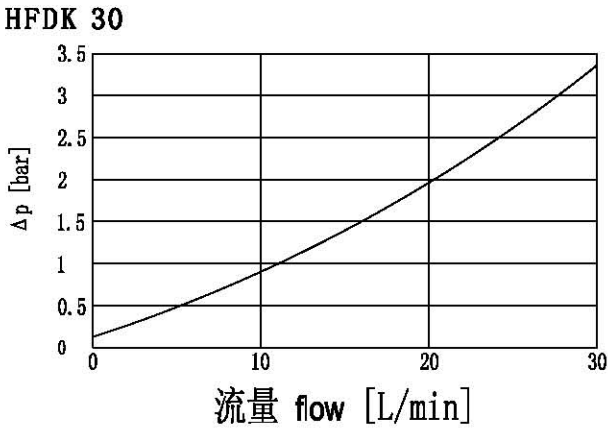
Filter total pressure drop is the sum of element and shell pressure drop. Refer to the following curve to get the pressure drop.
Special Point: The pressure drop in the Filter Specifications is the total pressure drop including the change-over valve.
Note: We suggest to confirm the filter spec by using the maximum pressure drop 1.6bar (20% Pressure Setting of Standard Indicator). Please contact us to check the flow rate if more than the suggested data.

5.1 壳体压降流量特性曲线, 符合ISO 3968

Filter Shell Pressure Drop Flow Rate
Characteristic Curve according to ISO 3968

壳体曲线适用于密度为0.86kg/dm³和运动粘度为30mm²/s的矿物油。这种情况下, 压降与密度成比例变化。

Shell Characteristic Curve is suitable for the mineral oil with density 0.86kg/dm³ & kinematic viscosity 30mm²/s. The change of pressure drop is in proportion to the density.

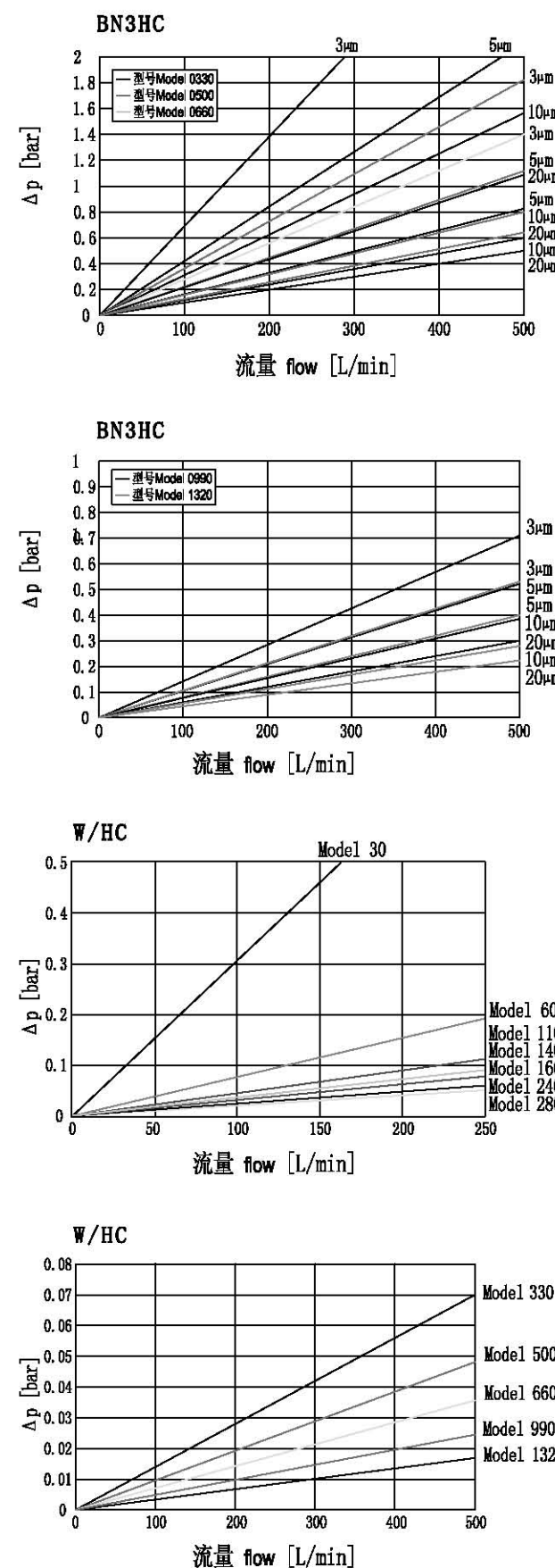
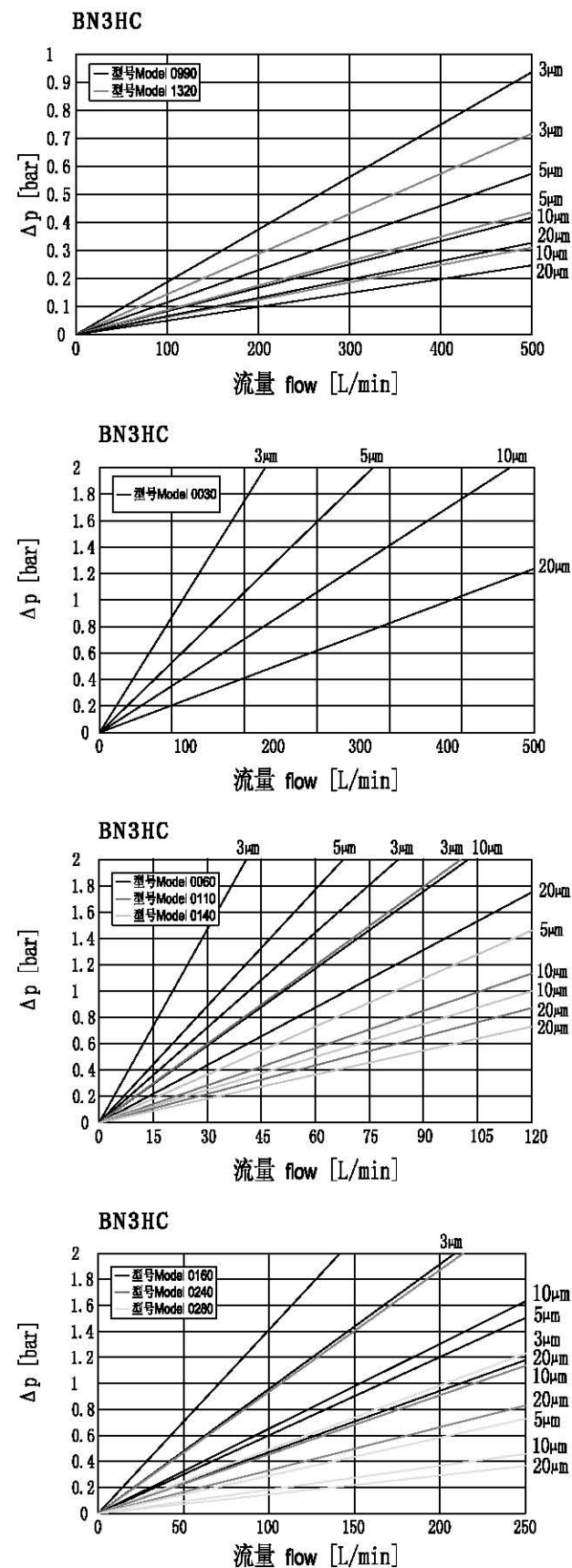
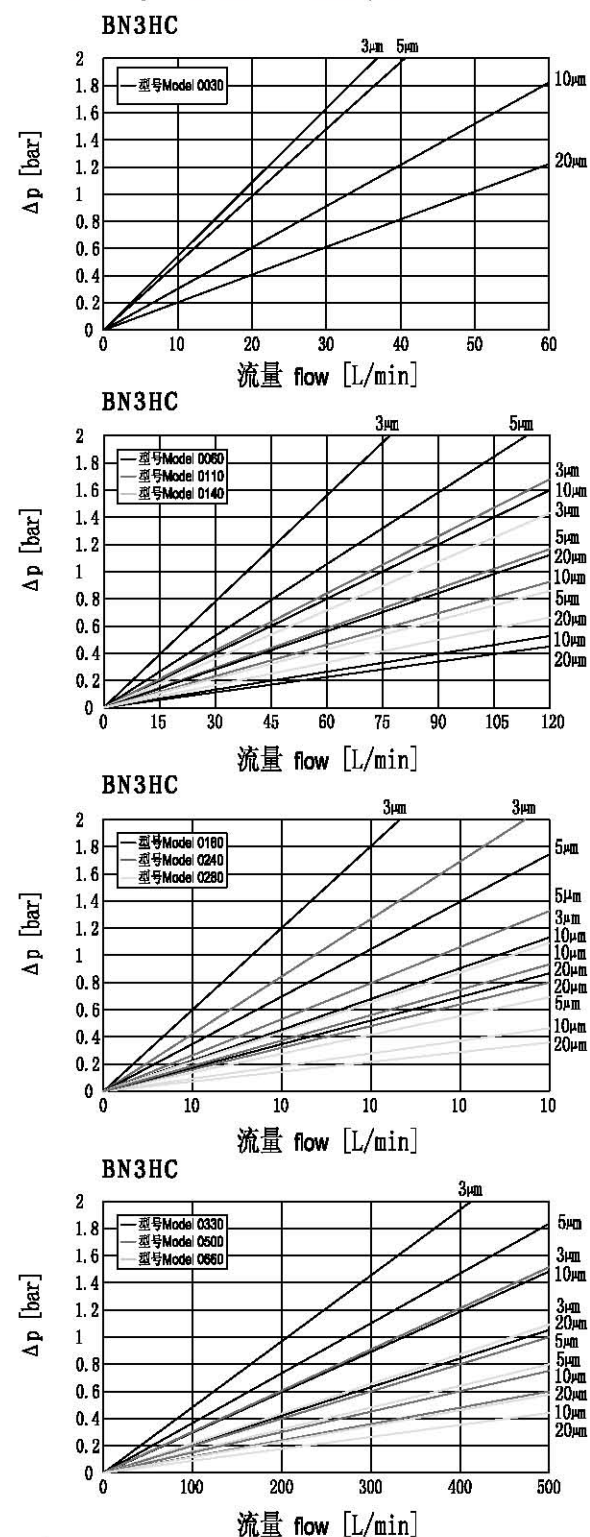


5.2 滤芯压降流量特性曲线

Filter Element--Pressure Drop
Characteristic Curve

滤芯曲线适用于运动粘度为 $30\text{mm}^2/\text{S}$ 的矿物油，压降与粘度成比例变化（见5.3举例）

Filter Element Characteristic Curve is suitable for the mineral oil with kinematic viscosity $30\text{mm}^2/\text{s}$. The change of pressure drop is in proportion to the viscosity. (to see 5.3 example)



5.3 举例 Example

概述:

Summarize:

$\Delta P_{\text{总Total}} = \Delta P_{\text{壳体Shell}} + \Delta P_{\text{滤芯Element}}$

$\times \frac{\text{粘度Viscosity } \text{mm}^2/\text{S}}{30\text{mm}^2/\text{S}}$

$\Delta P_{\text{壳体Shell}} = \text{从5.1读取 refer 5.1}$

$\Delta P_{\text{滤芯Element}} = \text{从5.2读取 refer 5.2}$

示例: Sample

参数: Parameter

$Q = 150\text{L/min}$: HFDK 330带with BH3HC

滤芯filter ($10\mu\text{m}$)

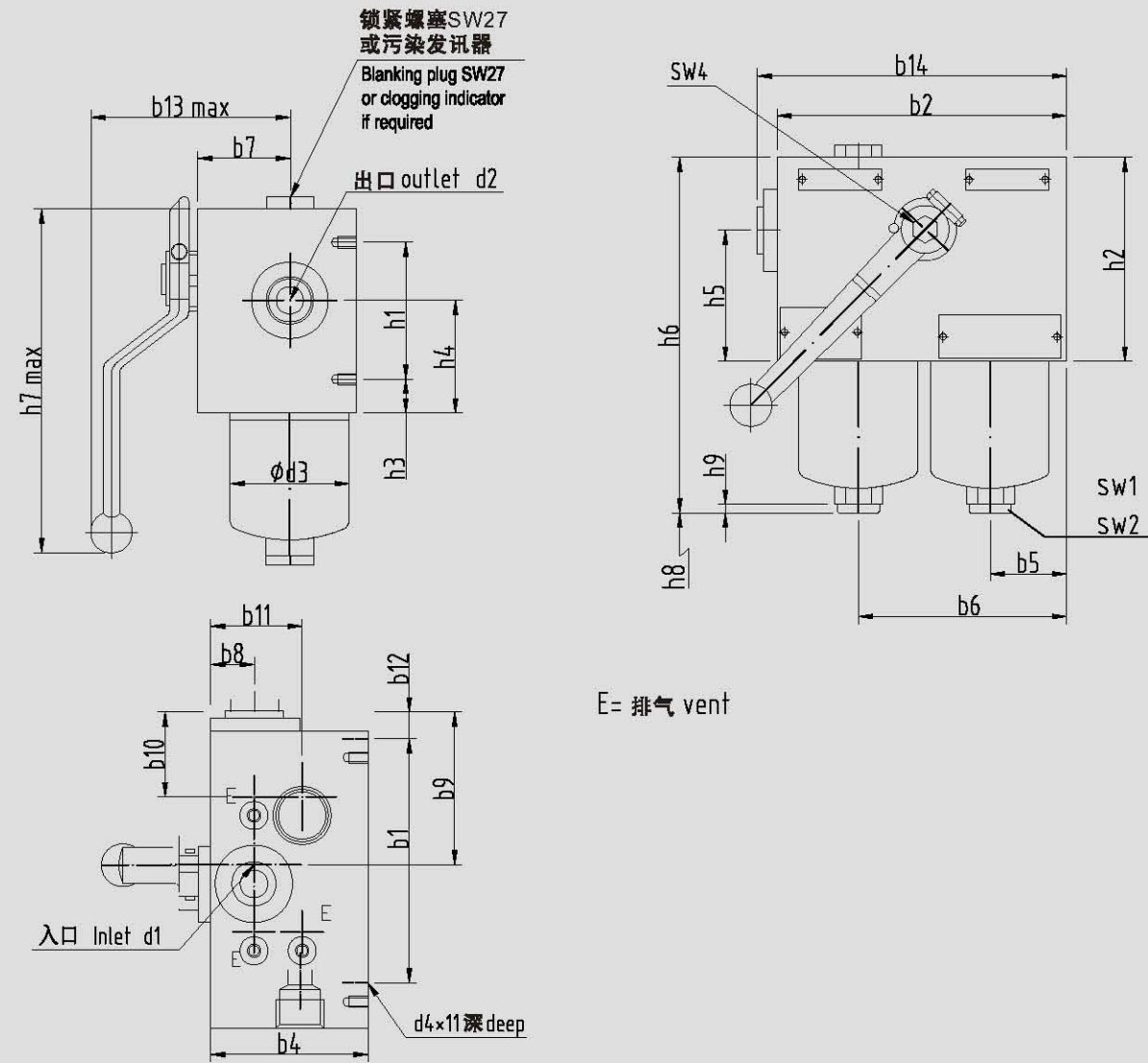
粘度Viscosity $= 46\text{mm}^2/\text{S}$

$\Delta P_{\text{壳体Shell}} = 0.84\text{bar}$
 $\Delta P_{\text{滤芯Element}} = 0.44 \times \frac{46\text{mm}^2/\text{S}}{30\text{mm}^2/\text{S}} = 0.68\text{bar}$

$\Delta P_{\text{总Total}} = 1.52\text{bar}$

6 外形尺寸 Overall Dimensions

6.1 HFDK 30-280

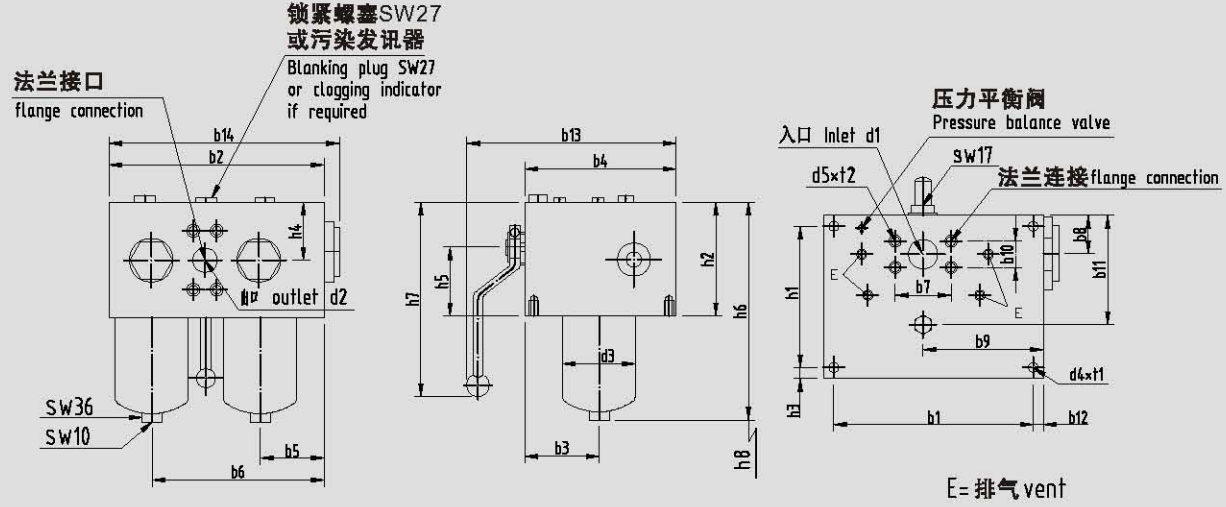


过滤器型号 Filter Model	尺寸 Size (mm)															
	b 1	b 2	b 4	b 5	b 6	b 7	b 8	b 9	b 10	b 11	b 12	b 13	b 14	d 1	d 2	d 3
30	130	145	80	35	96	47	22.8	81	49	59	7.5	131	155	G1/2	G1/2	52.2
60	138	170	92	45	121.5	54	26	87	48.5	54	16	150	181	G3/4	G3/4	68.2
110																
140																
160	190	210	128	52.5	157.5	75.5	35.5	105	52.5	75.5	10	193	221	G11/2	G1 1/2	95.2
240																
280																

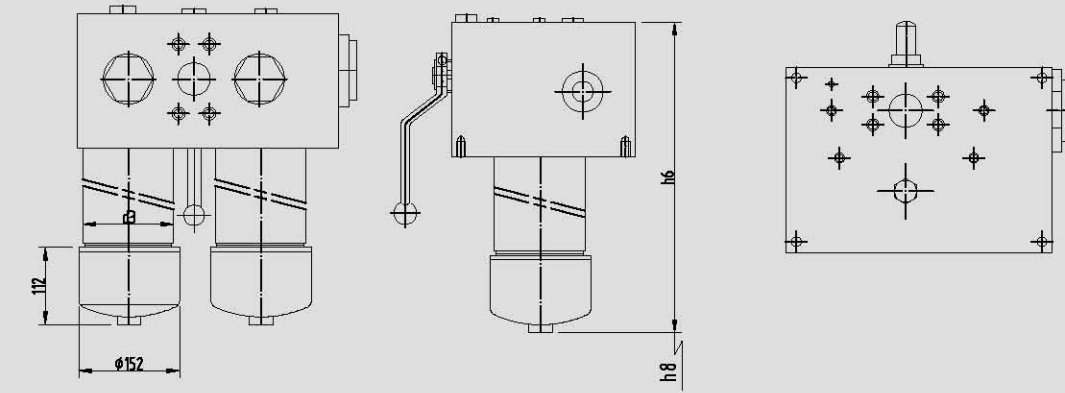
过滤器型号 Filter Model	尺寸Size (mm)													
	d4	h1	h2	h3	h4	h5	h6	h7	h8	h9	t1	SW1	SW1	SW1
30	M6	64	80	8	47	43	171	180	75	5	7	24	6	9
60	M6	78	117	19.5	64.5	76	204.5	205	75	5	7	27	10	12
110							272.0							
140							315.5							
160	M10	96	162	33	106	100	282.5	245	85	5	11	32	10	14
240							342.5							
280							524.5							

* DIN ISO 228

6.2 HFDK 330-660



6.3 HFDK 990-1320



过滤器型号 Filter Model	尺寸Size (mm)														
	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11	b12	b13	b14	d1
330	359	385	127	265	115	309	96.8	60.5	212	44.5	175.5	13	326	405	DN50 (2")
500															
660															
990															
1320															

过滤器型号 Filter Model	尺寸Size (mm)													
	d2	d3	d4	d5	h1	h2	h3	h4	h5	h6	h7	h8	t1	t2
330	DN50 (2")	130.2	M12	M20	239	190	13	92	108	357.5	309	95	13	27
500		130.2								450.5		95		
660		130.2								527.0		95		
990		130								677.5		500		
1320		130								843.5		670		

*SAE 接口 6000PS

*SAE connection 6000PS