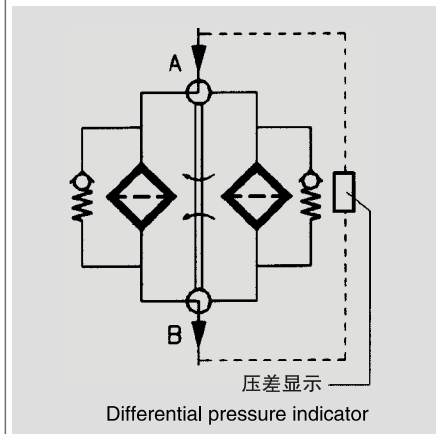


双筒管路过滤器LFLD

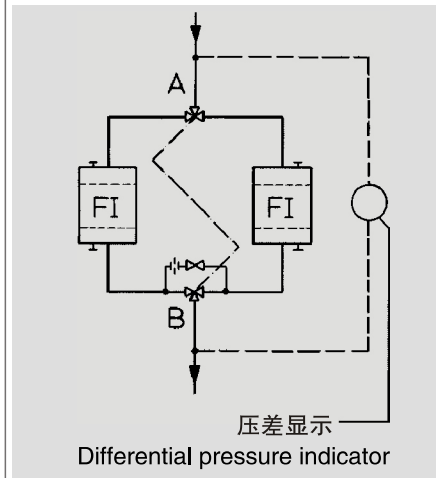
Double Barrel Pipeline Filter LFLD

- 铸造式: 铸铁/铸钢
Cast Type: Carbon Iron/ Carbon Steel
- 流量至1300L/ min
Maximum Flow Rate 1300L/min
- 压力等级25/40/64bar
Pressure Level 25/40/64bar
- 带球形切换阀
Ball Type Switching Valve

液压系统 Hydraulic System



润滑系统 Lubrication System



1 技术说明 Technical States

1.1 过滤器壳体 Filter Shell

结构 Structure

该过滤器壳体及其连接件是按照国际规范设计的。两个筒体通过一个可切换的阀体来连接。通径DN80及其以上的过滤器其两个筒体间连有压力平衡管路，小于DN80则平衡阀置于切换阀体内。这种结构使切换阀动作时过滤器没有明显的压力冲击。标准的过滤器均带有放气孔，卸压孔和污染发讯器安装孔。

The shell and adapting pieces are designed by international standard. The two barrels are connected by a switching valve. There is a pressure balance pipeline between two barrels for DN80 and above to reduce pressure impact while switching. Standard Filters have all the vent hole, release hole and clogging indicator mounting holes.

1.2 滤芯 Filter Element

- BN3HC: 25bar
- P/HC: 10bar
- W/HC: 30bar

1.3 滤芯介质的兼容性 Compatibility of Medium

适用于矿物油、润滑油、抗燃油、以及可迅速分解的生物油。用于水介质时请咨询我们技术部门。Suitable for mineral oils, lubrication oils, non-flam oils and rapidly biodegradable oils. Please inquire for aqueous medium if needed.

2 概述 General

安装 Mounting

过滤器必须柔性安装，不能刚性固定在基础上或作为管路的支撑。
Filters must be flexibly mounted and not fixed rigidly to the floor or used as a pipe support.

流向 Flow Direction

入口 Inlet:
上面 Top

出口 Outlet:
下面 Bottom

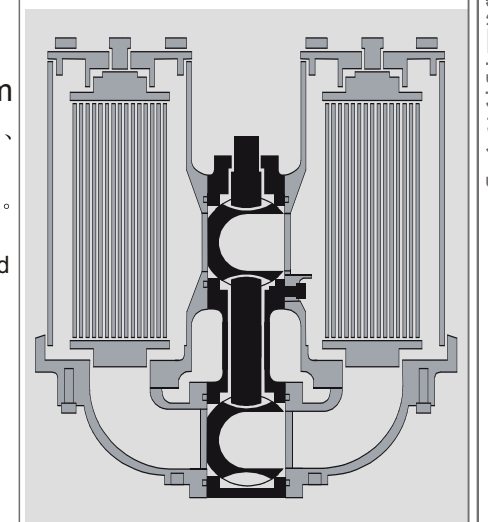
温度范围
Temperature Range
-10°C~+100°C

污染发讯器设定压力
Pressure Setting of Clogging Indicator
 $\Delta Pa = 3.5\text{bar} - 0.2\text{bar}$

其他设定压力请咨询。
Please inquire for other setting pressure if needed.

旁通阀开启压力
Opening Pressure of Bypass Valve
 $\Delta Po = 4\text{bar} + 0.5\text{bar}$

其他开启压力请咨询。
Please inquire for other opening pressure if needed.



3 型号说明 (订货示例)

Model Code (Order Example)

3.1 过滤器

Filter

过滤器型式 Filter Type _____
 过滤材料 Material of Element _____
 BN/HC 玻璃纤维 Glass Fiber
 P/HC 纸质 Paper
 W/HC 不锈钢金属网 Stainless Steel Net
 壳体材料/规格 Shell Material/Spec _____
 铸铁 Cast Iron GGG40: 111/241/331/501/661/851/951/1301/1321
 不锈钢 Stainless Steel GS: 332/502/662/852/952/1302/1322
 铸造不锈钢 Cast Stainless Steel 1.4581: 503/853
 工作压力 Working Pressure _____

D=25bar(规格 Spec 331-1301,853)
 E=40bar(规格 Spec 111-241,503,662-1302)
 F=64bar(规格 Spec 332-502)
 切换阀型式 Switching Valve Type _____

A=球阀 所有通径 A=ball valve all DN
 连接型式/规格 Connection Type/Size _____
 壳体材料: 铸铁 GGG40(●) 铸钢 GS+铸造不锈钢 (x), 铸钢 GS(*)
 Shell Material: Cast Iron GGG40(●) Cast Steel+Cast Stainless Steel (x),
 Cast Steel GS(*)

代号 Code	连接类型 Connecting	过滤器型号 Filter Model							
		111	241	331 332	501 502	661 662	851 852 853	951 952	1301 1302
D	G 1	●							
F	G 1 1/2		●						
I	SAE DN 25	●							
J	DIN DN 50			*	* X				
K	SAE DN 40		●	●	●				
L	SAE DN 50			● *	● *	●	●		
M	SAE DN 65					●	●		
Q	DIN DN 80					*	* X		
R	DIN DN 100							*	*
S	SAE/DIN DN 80					●	●	●	●
T	SAE/DIN DN 100							●	●

其他通径和ANSI法兰型式请咨询
 Please inquire for other DN & ANSI flange if needed.

过滤精度 μm Filtration Precision (μm) _____
 BN3HC: 3, 5, 10, 20
 P/HC: 10, 20
 W/HC: 25, 50, 100, 200

污染发讯器型式 Type of Clogging Indicator _____
 A 无发讯器, 带钢制螺塞 No Indicator Port, with steel plug
 B 目视污染指示器 Visual clogging indicator
 C 电气发讯器 Electrical clogging indicator
 D 目视/电气发讯器 Visual/Electrical clogging indicator

型式代号 Type Number _____
 1 标准连接 Standard Connection

LFLD BN/HC 1301 D A S 10 D 1

改型代号 Modification Number _____
 X 提供最新型 Newest Version Provided
 补充说明 Supplemental Instruction _____

V 氟橡胶密封, 过滤器适用于可迅速生物分解的液压介质和磷酸酯 (HFD-R)
 FPM seal, filter suitable for rapidly biodegradable oil and organic phosphate (HFD-R)
 L 相应电压 (24V, 220V) corresponding voltage (24V, 220V)
 KB 无旁通阀 No Bypass Valve
 B 特殊旁通开启压力 (B1=1bar, B6=6bar)
 Special Opening Pressure for Bypass Valve (B1=1bar, B6=6bar)
 STV 带支撑脚 with support foot
 SB 带压力平衡管路 with pressure balance pipeline
 SB2 压力平衡管路 pressure balance pipeline
 DE 可测量滤芯压降 measurable pressure drop of element

3.2 滤芯

Filter

规格 Spec _____
 0110、0240、0330、0500、0660、0850、0950、1300
 型式 Type _____

R
 过滤精度 μm Filtration Precision (μm) _____
 BN3HC: 3, 5, 10, 20
 P/HC: 10, 20
 W/HC: 25, 50, 100, 200

滤芯材料 Material of Element _____
 BN3HC, P/HC, W/HC

补充说明 Supplemental Instruction _____
 V 氟橡胶密封, 过滤器适用于易迅速生物分解的油和磷酸酯 (HFD-R)
 FPM seal, filter suitable for rapidly biodegradable oil and organic phosphate (HFD-R)
 W 丁腈胶密封, 过滤器适用于乳化液 (HFA, HFC)
 NBR seal, suitable for oil-water emulsions (HFA/HFC)
 KB 无旁通阀 No Bypass Valve
 B 旁通阀有特殊开启压力 (B1=1bar, B6=6bar)
 Special Opening Pressure for Bypass Valve (B1=1bar, B6=6bar)

1300 R 010 BN3HC /-V

4 过滤器技术参数

Filter--Technical Parameters

过滤器型号 Filter Model	连接尺寸 Connection	滤芯型号 Model of element	滤芯个数 Number of elements per side	重量带滤芯 (kg) Weight (Kg) with element	最大流量 Qmax (W/HC、P/HC)
111	G 1	0110R...	1	17	70
	SAE DN 25			17	70
241	G 1 1/2	0240R...	1	27	170
	SAE DN 40			27	170
331	SAE DN 40	0330R...	1	33	170
331/332	SAE DN 50			37	260
332	DIN DN 50			37	260
501	SAE DN 40			35	170
501/502	SAE DN 50	0500R...	1	39	260
502/503	DIN DN 50			39	260
661	SAE DN 50			56	170
661	SAE DN 65	0660R...		74	310
661	SAE/DIN DN 80			82	480
662	DIN DN 80			82	480
851	SAE DN 50			62	170
851	SAE DN 65			80	310
851/853	SAE/DIN DN 80	0850R...	1	88	480
852	DIN DN 80			88	480
951	SAE/DIN DN 80			105	480
951	SAE/DIN DN 100	0950R...	1	120	900
952	DIN DN 100			120	900
1301	SAE/DIN DN 80			110	480
1301	SAE/DIN DN 100	1300R...	1	125	900
1302	DIN DN 100			125	900

4.1 壳体材料

Shell Material

材料 Material	压力等级 Pressure range	规格/额定流量 Size/Nom.flow rate L/min
球墨铸铁 GGG40 Spherical cast iron GGG40	P=40 bar P=25 bar	111-241 331-1301
铸钢 GS Cast steel GS	P=64 bar P=40 bar	332-502 662-1302
铸造不锈钢 1.4581 Cast stainless steel 1.4581	P=40 bar P=25 bar	503 853

5 过滤器规格的确定

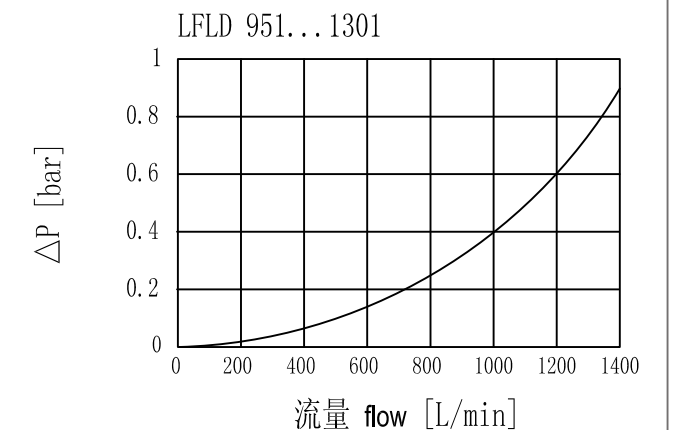
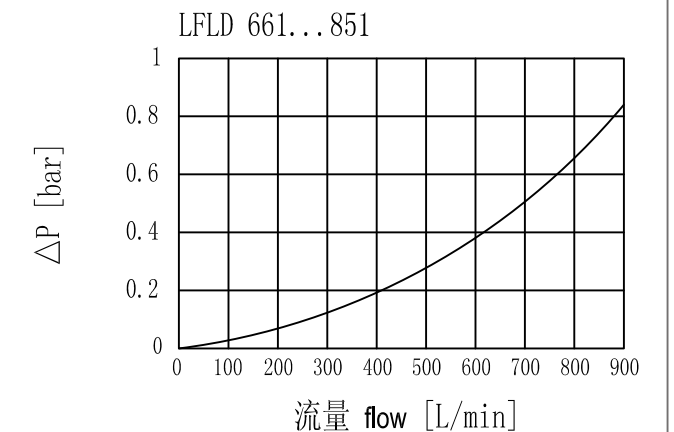
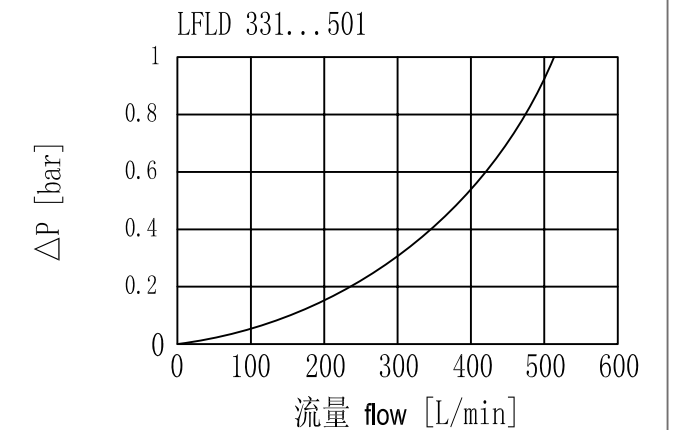
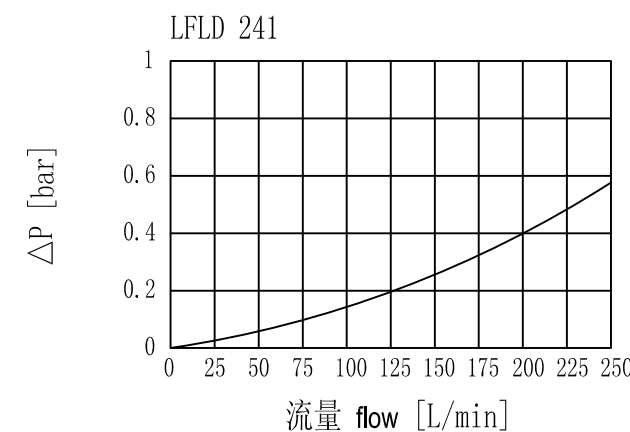
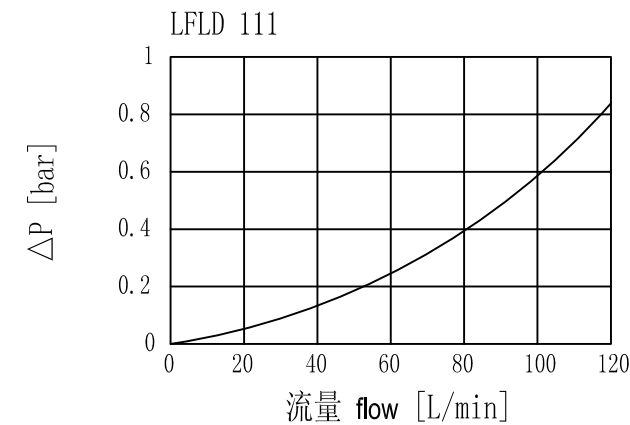
Filter Spec Confirmation

过滤器的总压降等于壳体的压降(包括切换阀)与滤芯的压降之和。可按下列特性曲线来计算压降。
Filter total pressure drop (including switching valve) is the sum of element and shell pressure drop. Refer to the following curve to get the pressure drop.

5.1 壳体压降流量特性曲线, 按ISO3968

Filter Shell Pressure Drop Flow Rate Characteristic Curve, according to ISO3968

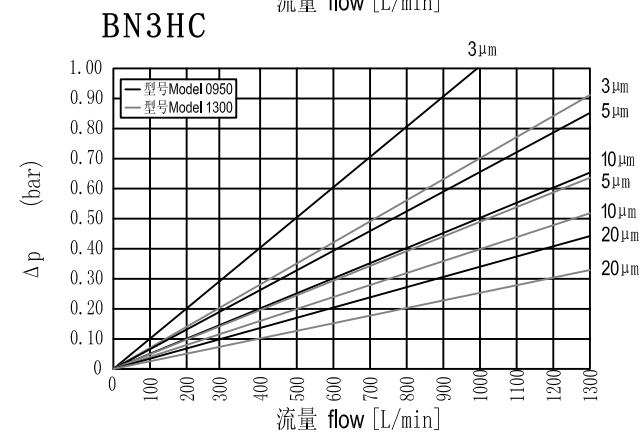
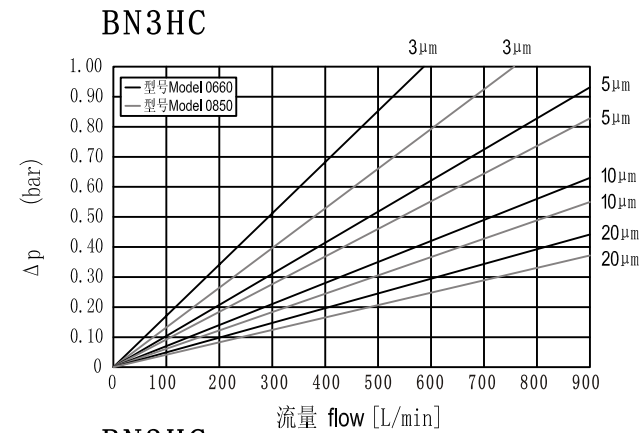
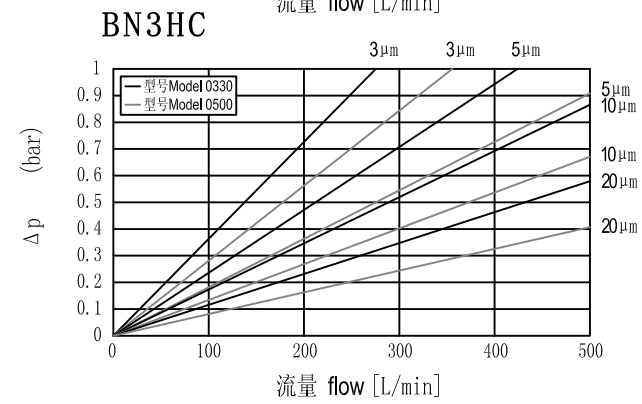
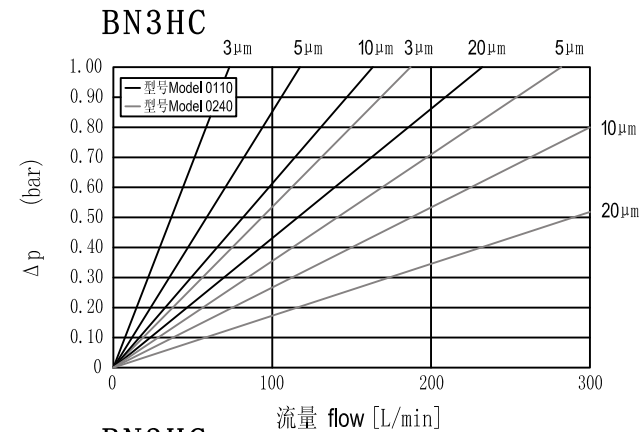
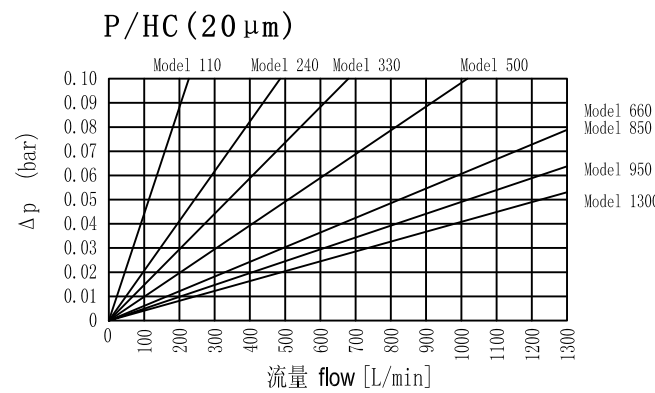
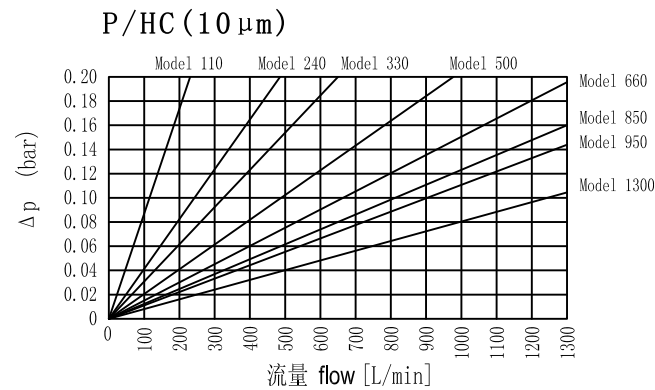
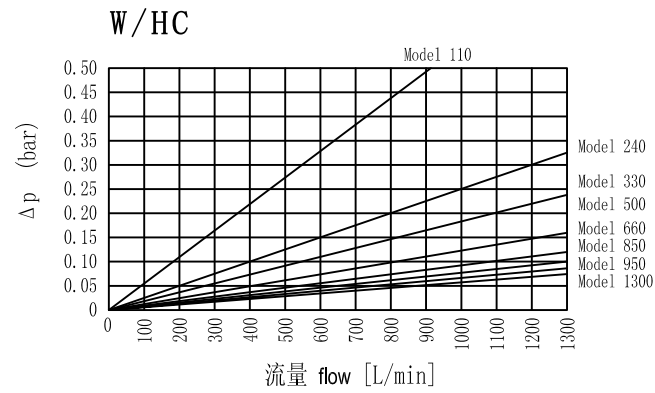
壳体曲线适用与密度为0.86/dm³和运动粘度为30mm²/s的矿物油。这种情况下, 压降与密度成比例变化。
Shell Characteristic Curve is suitable for the mineral oil with density 0.86kg/dm³ & kinematic viscosity 30mm²/s. The change of pressure drop is in proportion to the density.



5.2 滤芯压降流量特性曲线

Filter Element--Pressure Drop Characteristic Curve

滤芯特性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(见第5.3节举例)
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 section 5.3 sample)



5.3 举例 Example

概述:

Summarize:

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

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

$\Delta P_{\text{壳体Shell}}$ =根据第5.1节计算出refer 5.1

$\Delta P_{\text{滤芯}}$ =流通Q/n.粘度为 $30\text{mm}^2/\text{s}$ 时第5.2

节确定的滤芯压降

$\Delta P_{\text{Element}}$ = the Value

(Flow Rate Q & Auxiliary $30\text{mm}^2/\text{s}$), refer 5.2

示例: Sample

系统参数System Parameters: Q=600L/min

LFLD661, W/HC金属网滤芯metal net element;

粘度Viscosity= $100\text{mm}^2/\text{s}$, 40°C

$\Delta P_{\text{壳体Shell}}=0.33\text{bar}$

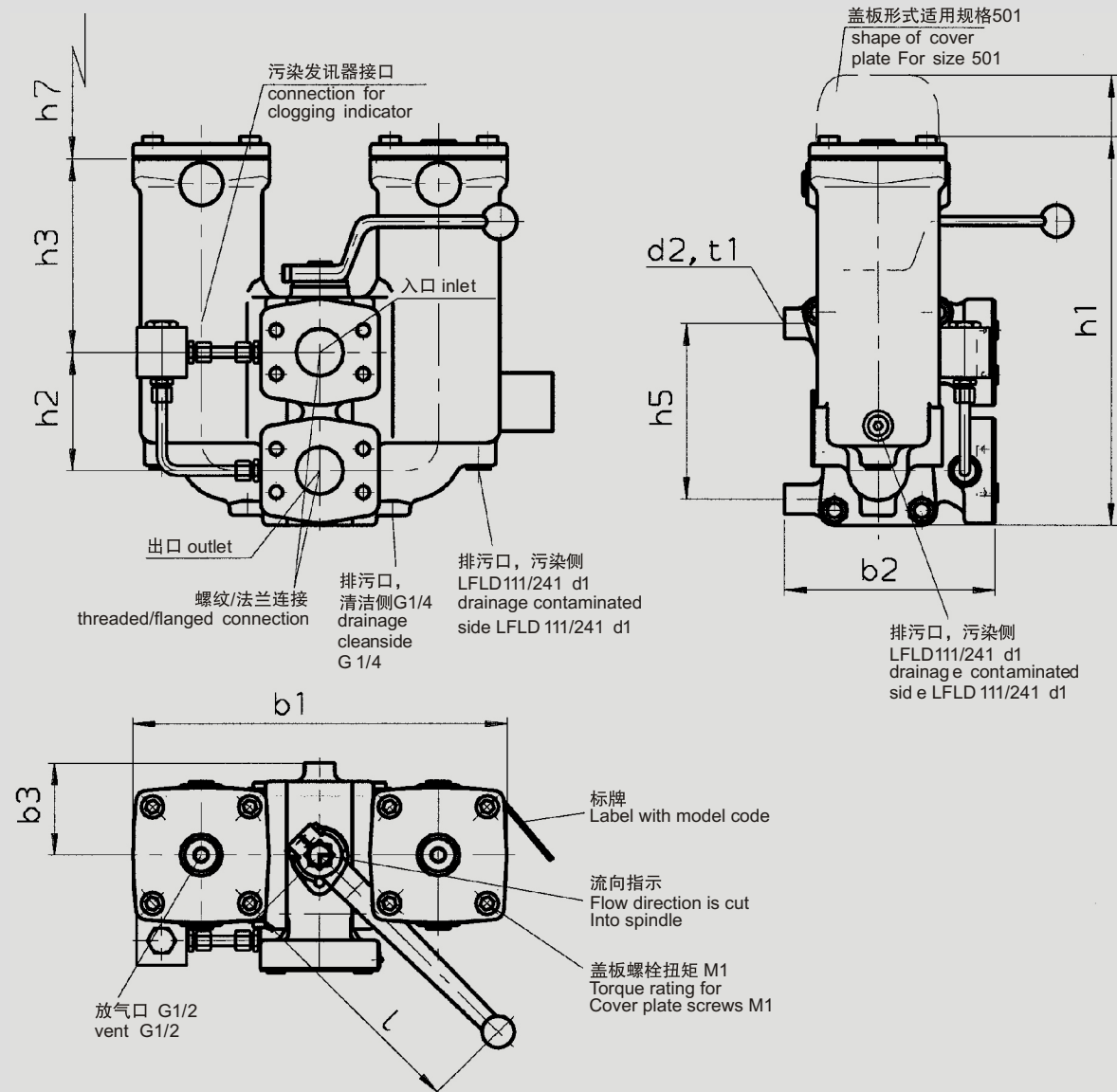
$$\Delta P_{\text{滤芯Element}}=0.054 \times \frac{100 \text{ mm}^2/\text{S}}{30 \text{ mm}^2/\text{S}}$$

$$\Delta P_{\text{总Total}} = \Delta P_{\text{壳体Shell}} + \Delta P_{\text{滤芯Element}} = 0.51\text{bar}$$

6 外形尺寸

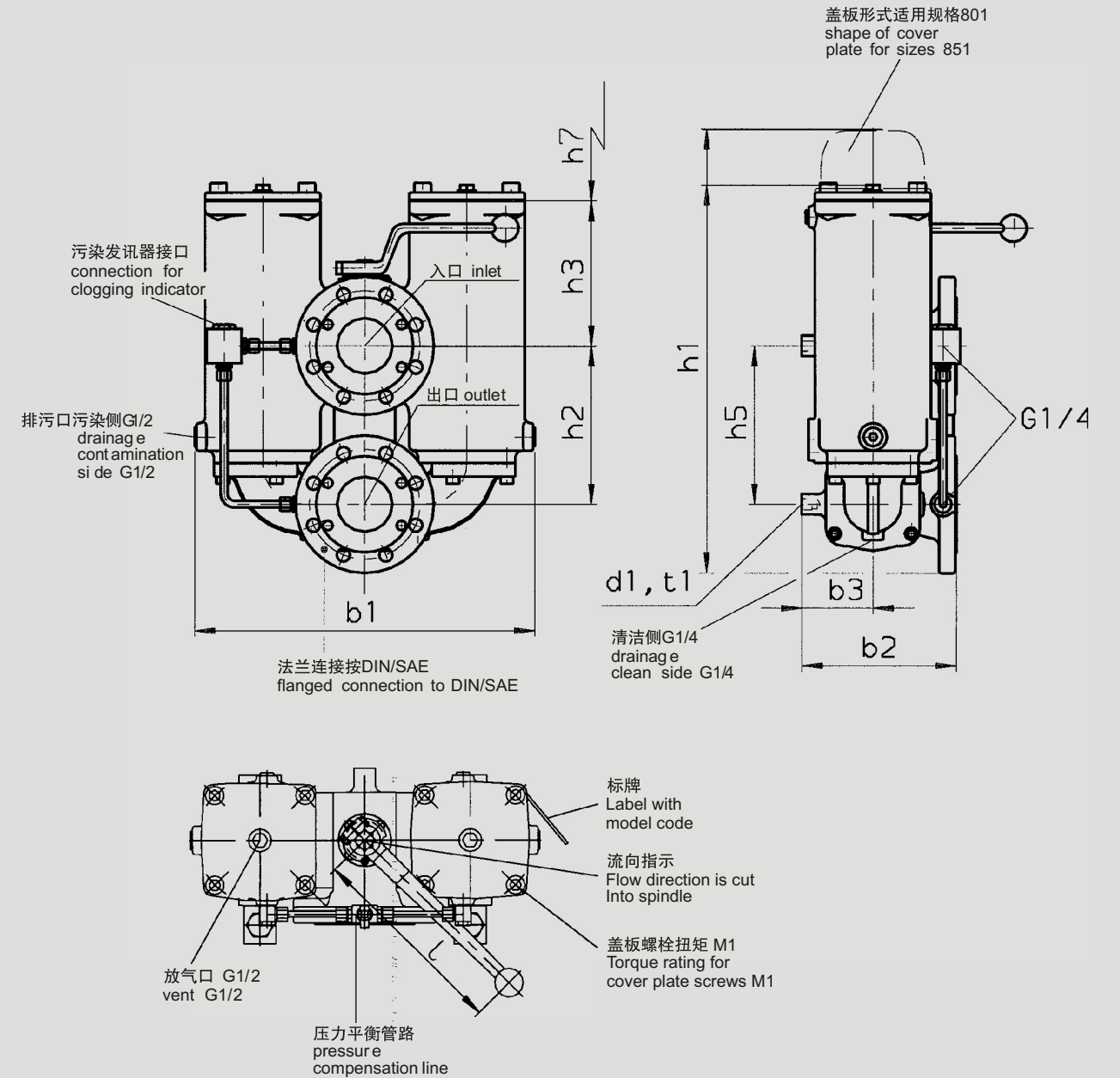
Overall Dimensions

6.1 LFLD 111-501



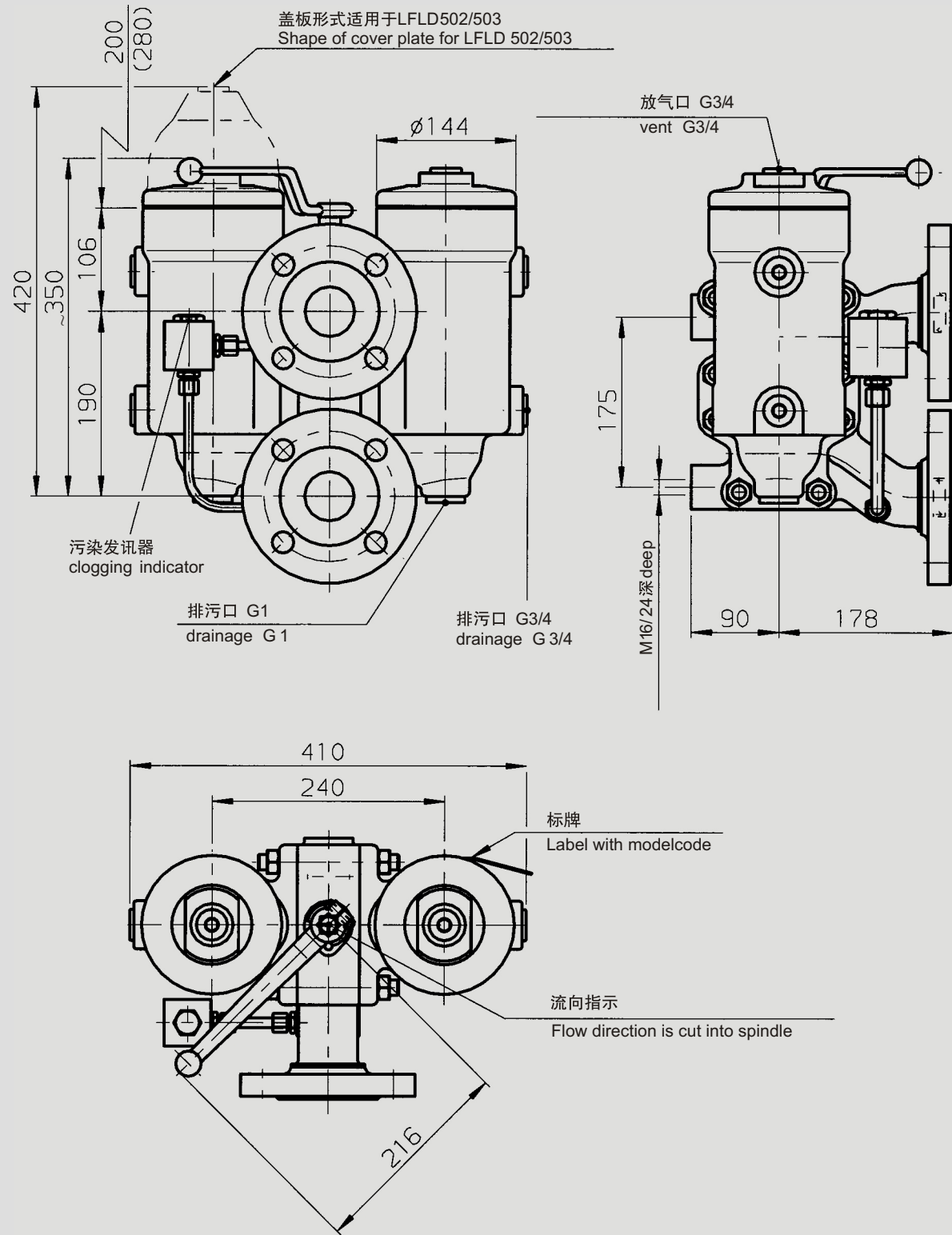
过滤器型号 Filter Model	法兰连接 Flanged connection	螺纹连接 Threaded connection	尺寸 Size (mm)												
			b1	b2	b3	d1	d2	h1	h2	h3	h5	h7	l	M1(Nm)	t1
LFLD111	DN 25 (1")	G1	233	157	63	G $\frac{1}{4}$	M12	263	80	132	80	175	173	24	25
LFLD241	DN 40 (1 1/2")	G1 1/2	302	167	75	G $\frac{1}{4}$	M12	321	95	155	140	210	216	40	18
LFLD331	DN 40 (1 1/2")		396	167	75	G $\frac{1}{2}$	M12	302	95	145	140	200	216	45	18
LFLD331	DN 50 (2")		380	187	85	G $\frac{1}{2}$	M12	323	110	140	165	200	216	45	18
LFLD501	DN 40 (1 1/2")		396	167	75	G $\frac{1}{2}$	M12	382	95	145	140	280	216	45	18
LFLD501	DN 50 (2")		380	187	85	G $\frac{1}{2}$	M12	400	110	140	165	280	216	45	18

6.2 LFLD 661-1301

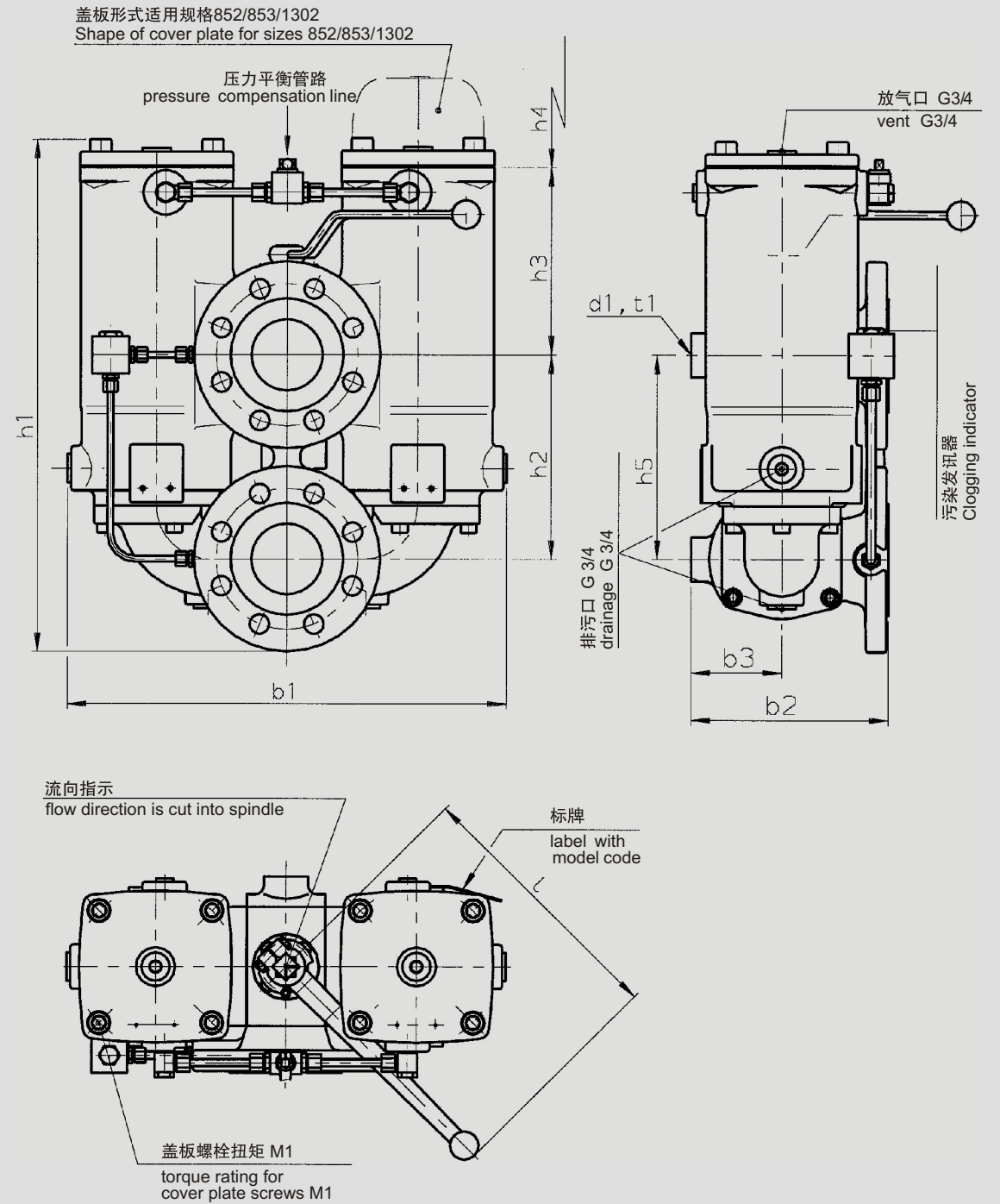


过滤器型号 Filter Model	法兰连接 Flanged connection	尺寸 Size (mm)												
		b1	b2	b3	h1	h2	h3	h5	h7	l	M1(Nm)	d1	t1	
LFLD661	DN 50 (2")	496	187	85	460	110	282	165	340	216	150	M12	18	
LFLD661	DN 65 (2 1/2")	496	237	85	472	110	282	165	340	216	150	M12	18	
LFLD661	DN 80 (3")	490	222	102	566	230	210	230	340	301	150	M12	23	
LFLD851	DN 50 (2")	496	187	85	544	110	282	165	420	216	150	M12	18	
LFLD851	DN 65 (2 1/2")	496	237	85	556	110	282	165	420	216	150	M12	18	
LFLD851	DN 80 (3")	490	222	102	650	230	210	230	420	301	150	M12	23	
LFLD951	DN 80 (3")	548	222	102	595	230	243	230	370	301	250	M12	23	
LFLD951	DN 100 (4")	555	248	118	640	250	238	250	370	301	250	M16	23	
LFLD1301	DN 80 (3")	548	222	102	701	230	243	230	490	301	250	M12	23	
LFLD1301	DN 100 (4")	555	248	118	746	250	238	250	490	301	250	M16	23	

6.3 LFLD 332/502/503



6.4 LFLD 662-1302、853



过滤器型号 Filter Model	法兰连接 Flanged connection	尺寸 Size mm											
		b1	b2	b3	h1	h2	h3	h5	h4	l	M1(Nm)	d1	t1
LFLD662	DN 80 (3")	495	222	102	574	230	210	230	340	301	150	M12	23
LFLD852	DN 80 (3")	495	222	102	665	230	210	230	420	301	150	M12	23
LFLD853	DN 80 (3")	495	222	102	665	230	210	230	420	301	150	M12	23
LFLD952	DN 100 (4")	573	248	118	719	250	238	250	380	301	250	M16	17
LFLD1302	DN 100 (4")	573	248	118	745	250	238	250	490	301	250	M16	17