

GRH Category

GEAR FLOW DIVIDERS

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Introduction of Flow Divider 分流器简介

Two or several gear motors can be combined to flow divider after being connected by coupling. It guarantees synchronous operation and accuracy of power element like cylinder (Its principle drawing is as follows), hydraulic liquid from the pipe is input into the inlet port and the same amount liquid is distributed to the outlet port by the rotation of gears that with same specification. Obviously, accuracy of flow divider is up to accuracy of gears and relative spare parts.

GRH has two series for flow divider 1FDF and 2FDF. Flow accuracy and pressure loss are as follows:

两个或几个齿轮马达通过联轴器联接后可组成分流马达，它可以保证执行元件（如油缸）同步运行，并获得高的同步精度，它的原理如下图：从进油口输入来自管路的液压油，通过联结在一个轴上的相同规格尺寸的齿轮副的旋转运动分配给出油口相同的流量，显而易见，分流马达的精度取决于齿轮副以及与其相配零件的精度。

GRH有二个系列分流马达：1FDF、2FDF。分流精度及压力损失如下：

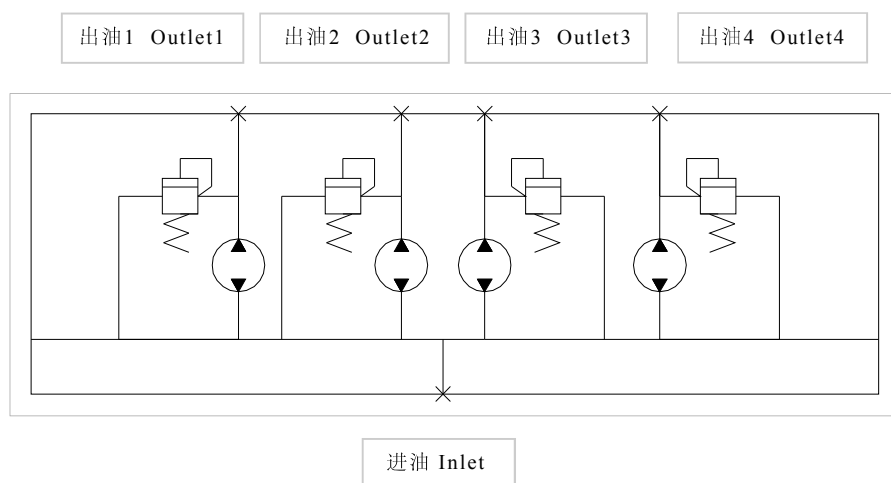
Type 型号	Flow Accuracy 分流精度	Pressure Drop 压力损失
1FDF	$\pm 1.5\% - \pm 2\%$	16-19bar
2FDF	$\pm 1.5\% - \pm 2\%$	11-14bar

It should be noted that flow accuracy is also related to the factors below: System pressure, viscosity of hydraulic liquid, load that each power unit bears and overall flow. These factors should be taken into account at time of application.

Flow divider can be integrated with relief valve, check valve and governor valve, protecting system pressure and filling the oil. For specific requirements, please contact GRH.

需要注意的是分流精度也和下面一些因素有关：系统压力、液压油的粘度、每个执行机构所承担的负载、总的流量等，在实际使用和设计时要考虑这几方面的影响。

分流马达也可以和溢流阀、单向阀、调速阀集成，起到保护系统压力、补油等功能，具体要求请和GRH联系。

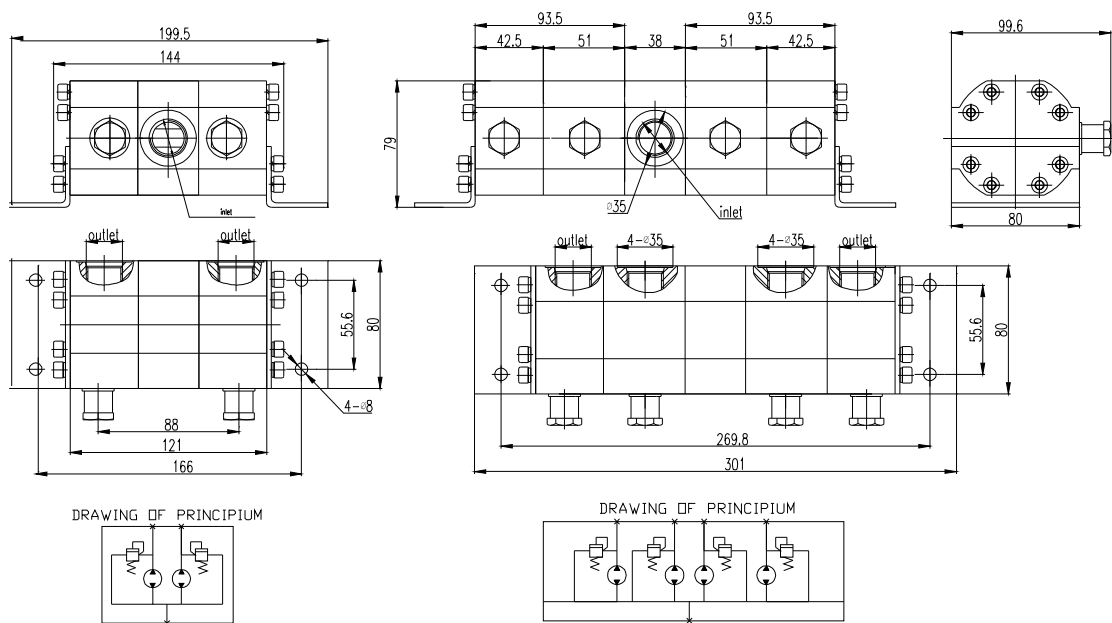


1FDF**L**-2/4 Flow Divider 分流马达



Specification Dimension 性能参数及外形尺寸

Displacement 排量		SAE Port SAE油口		Minimum Flow 最小流量/秒(sec)		Maximum Flow 最大流量/秒(sec)		Cont. Diff Between Pressure Inlet 进出油口压力差(outlet)		Maximum Outlet Pressure any Section 出油口最大压力	
in ³	cm ³	inlet	outlet	gpm	lpm	gpm	lpm	psi	bar	psi	bar
0.097	1.60	sae6	sae6	0.8	3.0	1.7	6.4	1800	124	3500	240
0.129	2.13	sae8	sae8	1.2	4.5	2.5	9.5	1800	124	3500	240
0.194	3.18	sae8	sae6	1.7	6.4	4.5	13.2	1800	124	3500	240
0.258	4.24	sae10	sae10	2.5	9.5	5	18.9	1800	124	3500	240
0.323	5.29	sae10	sae10	3.0	11.4	6.0	22.7	1800	124	3500	240
0.388	6.36	sae10	sae10	3.5	13.2	7.0	26.5	1600	110	3500	240
0.453	7.42	sae10	sae10	4.0	15.1	8.0	30.3	1300	90	3500	240
0.517	8.42	sae10	sae10	4.5	17.0	9.0	34.1	1200	83	3500	240



Ordering Code

1	FD	F	04	L35	-2/4
Model1	Function	Pressure Level	Displacement	Inlet/Outlet Combination	Number of Section
Group 1	Flow Divider	16~25 Mpa	4ml/r	L35 etc. Reference Accessory 1	-2/4 Section

型号说明

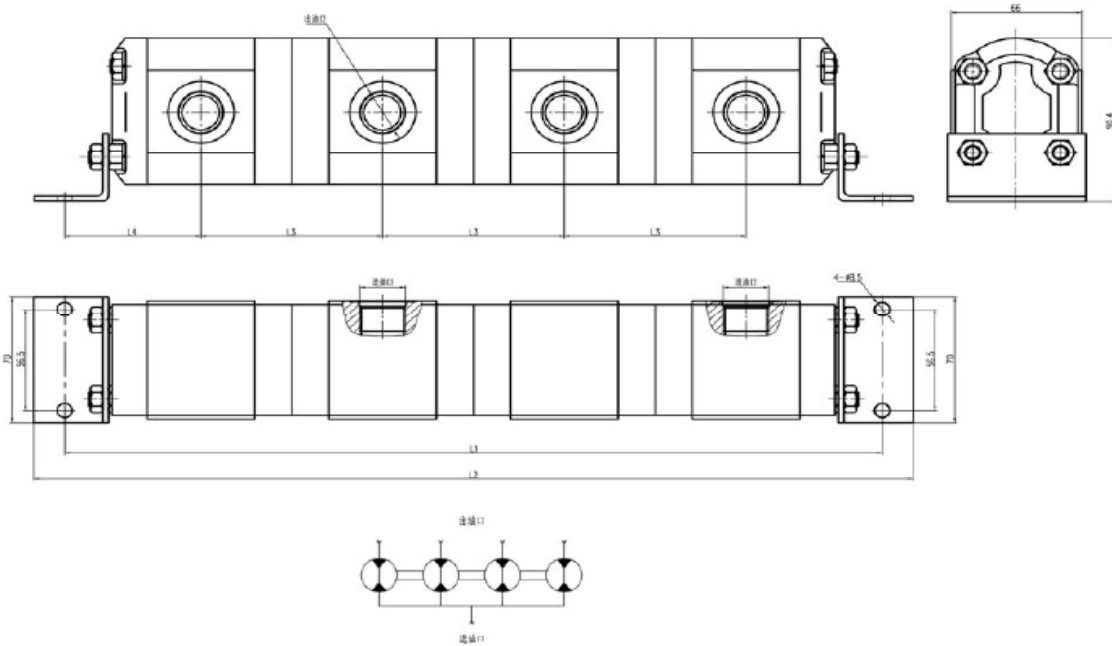
1	FD	F	04	L35	-2/4
组号	功能代码	压力等级代码	排量	进出油口组合形式	出油口数
1组	齿轮式分流器	16~25 Mpa	4ml/r	L35 等, 参见附录 1	-2/4 两个、四个出口

1AFDF**L**-* Flow Divider 分流马达



Specification Dimension 性能参数及外形尺寸

Displacement 排量	SAE Port SAE 油口	Minimum Flow 最小流量/秒(sec)	Maximum Flow 最大流量/秒(sec)	Cont. Diff Between Pressure Inlet/Outlet 进出油口压力差
2.0	382.8	414	84	65.2
3.0	394.8	426	87	66.7
4.1	406.8	438	90	68.2
5.1	418.8	450	93	69.7
6.1	430.8	462	96	71.2
7.0	442.8	474	99	72.7



Ordering Code

1	AFD	FD	F2	04	L04	-4	-1
Model	Function	Function	Pressure Level	Displacement	Inlet/Outlet Combination	Number of Section	Number of Inlet
Group1	Flow Divider	Flow Divider	16~25Mpa	2ml/r	Reference Accessory 1		

型号说明

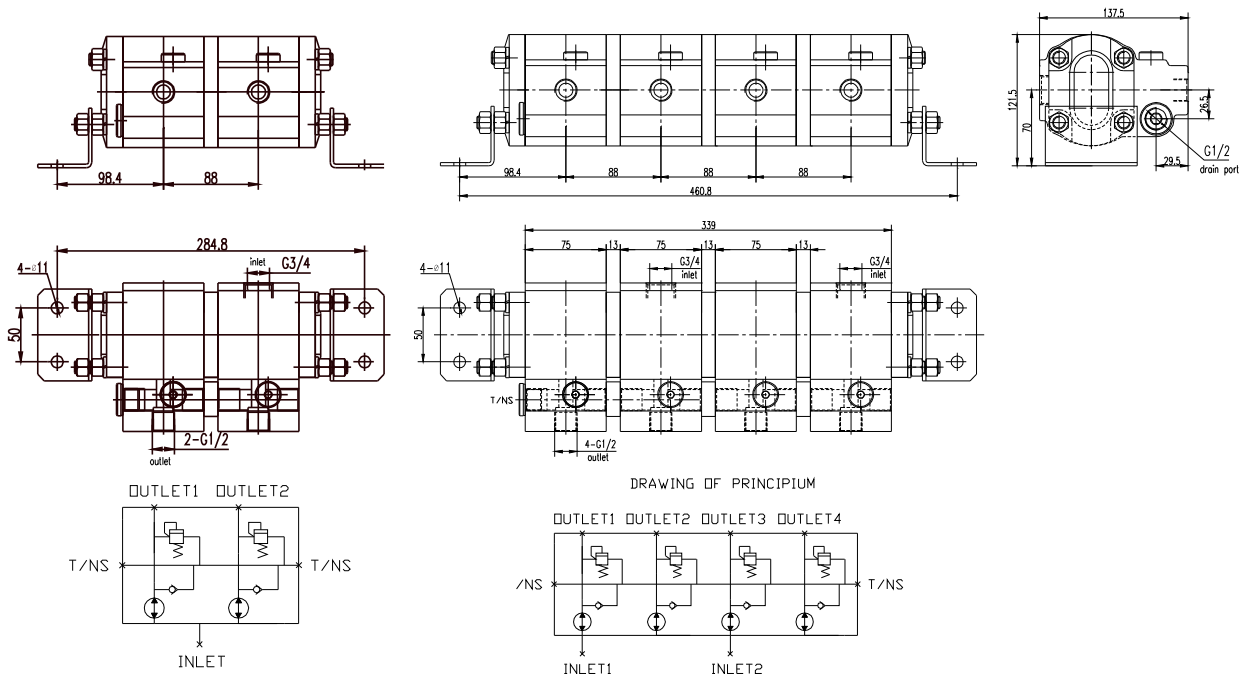
1	AFD	FD	F2	04	L04	-4	-1
组号	功能代码	功能代码	压力等级代码	排量	进出油口组合形式	联数	进口口数
1组	齿轮式分流器	齿轮式分流器	16~25Mpa	2ml/r	参见附录 1		

2FDF**L**-2/4 Flow Divider 齿轮式分流器



Specification Dimension 性能参数及外形尺寸

Displacement 排量		SAE Port SAE 油口			Minimum Flow 最小流量/秒(sec)		Maximum Flow 最大流量/秒(sec)		Cont. Diff Between Pressure Inlet/Outlet 进出口压力差		Maximum Outlet Pressure any Section 出油口最大压力	
in ³	cm ³	inlet	outlet	drain	GPM	LPM	GPM	LPM	PSI	BAR	PSI	BAR
0.366	6	G1/2	G3/8	G3/8	0.8-4.2	3.0-16	4.8	18	3142	220	3571	250
0.488	8	G1/2	G3/8	G3/8	1.1-5.0	4.0-19	5.8	22	3142	220	3571	250
0.671	11	G1/2	G3/8	G3/8	1.5-6.6	5.5-25	7.1	27	3142	220	3571	250
0.854	14	G1/2	G3/8	G3/8	1.8-8.4	7.0-32	9.0	34	2857	200	3142	220
1.037	17	G1/2	G3/8	G3/8	2.2-9.0	8.5-34	9.8	37	2857	200	3142	220
1.525	25	G1/2	G3/8	G3/8	3.1-12.7	12-48	14	53	2857	200	3142	220
1.891	31	G1/2	G3/8	G3/8	3.7-15.9	14-60	18.5	70	2286	160	2571	180



Ordering Code

2	FD	F	04	L35	-2/4
Model	Function	Pressure Level Code	Displacement	Inlet/Outlet Combination	Number of Section
Group2	Flow Divider	16 ~ 25 Mpa	8 ml/r	L35 etc, Reference Accessory 1	-2/4 Section

型号说明

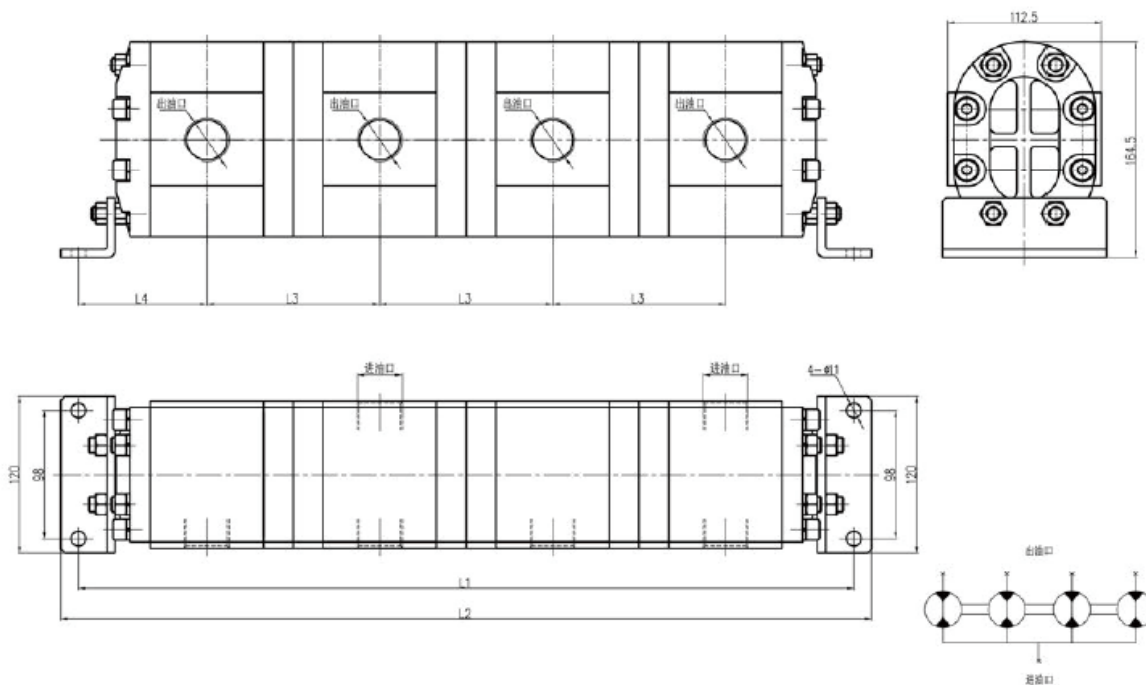
2	FD	F	04	L35	-2/4
组号	功能代码	压力等级代码	排量	进出口组合形式	出油口数
2组	齿轮式分流器	F:16~25 Mpa	8 ml/r	L35等, 参见附录1	-2/4 两个、四个出口

3FDF**L**-* Flow Divider 3FDF分流马达



Specification Dimensions 性能参数及外形尺寸

Displacement 排量 (ml/r)	L1/mm	L2/mm	L3/mm	L4/mm
20	552.4	578.4	122.5	92.3
30	582.4	608.4	130.0	96.0
40	610.4	636.4	137.0	99.5
50	636.4	662.4	143.5	102.8
60	668.4	694.4	151.5	106.8
70	696.4	722.4	158.5	110.3



Ordering Code

3	FD	F	60	L71	-4	-1
Model	Function	Pressure Level	Displacement	Inlet/Outlet Combination	Number of Section	Number of Inlet
Group3	Flow Divider	16~25 Mpa	60 ml/r	Reference Accessory 1		

型号说明

3	FD	F	60	L71	-4	-1
组号	功能代码	压力等级代码	排量	进油口组合形式	联数	进油口数
3组	齿轮式分流器	16~25 Mpa	60 ml/r	参见附录 1		

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