



VDMA 24 561 标准钟罩

Bellhousings acc. to VDMA 24 561



- VDMA24 561 标准尺寸
- 刚型/降噪型可选
- 替换方便

- *Dimensions acc. to VDMA 24 561*
- *Rigid and noise damping versions in identical length*
- *Easy interchangeability*

型号 Model type

RV 250 /

VDMA钟罩 VDMA bellhousing	
法兰-Ø Flange dia.	160
	200
	250
	300
	350
	400
	450
	550
	660
800	

钟罩总长 (包括 DF)
Total length of bellhousing incl. DF

详见第4, 5页
See table page 4+5

148 /

1000/

泵连接 Pump connection	
XXXX	内部加工代码 Internal machining code

DF/

可选内部代码 Optional internal code	
ZF	泵端法兰 Intermediate flange pump side
MZF	电机端法兰 Intermediate flange motor side
ZR	泵端中心法兰 Centerring pump side
MB	观察孔 Inspection hole
LB	漏油孔 Leakage boring
E	拧螺母 Press nut
GI	包括观察孔的保护网格 Including protective grid for MB
ST	包括观察孔的放油塞 Including drain plug for MB

带减振钟罩 Bellhousing with noise reduction

-	不带减振法兰 Without damping flange
DF	用于RV250-350的减振法兰 (整体) With damping flange from 250 - 350 (Mono-bloc)
DF350	用于RV400以上的减振法兰 With damping flange up from RV400
DV400	
DF401	

减振钟罩所允许的负载

Permitted weight load of damped bellhousings

	工作温度为 60°C 时, 减振钟罩及减振法兰所允许的负载 Permitted weight load for dampened bellhousing and damping flange valid for an operating temperature of 60°C					
	减振钟罩 Bellhousing noise reduction			减振法兰 Damping flange		
	RV 250	RV 300	RV 350	DV 400	DF 401/1N	DF 401/1H
中心距 L [mm] Centre to centre spacing [mm]	100	100	200	300	300	300
允许负载 F [N] Permitted weight load F [N]	400	1300	1000	2500	2500	4000

在其它中心距 L_x 下, 允许负载 $F_{zul.}$ 的计算参考如下公式:
Other centre to centre distances L_x , the permitted weight load $F_{zul.}$ can be calculated acc. to the approximation formula:

$$F_{zul.} [N] = F [N] + 0,5 F \left(\frac{L [mm]}{L_x [mm]} - 1 \right)$$

最大允许工作温度为 +80 °C, 短时间允许工作温度可达 +100 °C
Max. permitted operating temperature +80 °C, for short periods +100 °C

VDMA24 561标准减振整体型钟罩

Monobloc-Bellhousings with noise damper acc. to VDMA 24 561

液压附件生产商对于泵的噪音特性没有任何解决方法，这是众所周知的事情。如何降低气体、液体的声音以及结构噪音所带来的影响是泵设计工程师肩负的责任。

当机器的液压元件以及其相应集成体的结构噪音被传递时，包括基本频率和谐波在内的泵噪音特性会令人厌烦。泵的大幅振动以及产生的压力振动会导致极坏的结构共振，这种共振向来难以表述，即便是用分贝值形式的声压级进行检测。

为了尽可能地防止这种振动传递到其它集成体上，就需要实现结构噪音分离。除了必须使用弹性离合器以及非常规的压力管道，再使用减振钟罩可以使结构噪音彻底分离。这种类型的减振法兰包含一个弹性体，它能够有效防止泵与液压装置其它部分之间的金属接触。

R+L HYDRAULICS 公司生产并销售为液压装置降噪的减振法兰。基于本行业多年的经验，R+L HYDRAULICS 公司已生产出带有降噪功能的整体钟罩系统（见图4），它简化了传统结构设计。如今，降噪环和钟罩完全不用螺栓连接，而且，通过弹性体硫化将泵法兰直接粘接到钟罩上（弹性体也是径向上的支撑）。

It is a well-known fact, that manufacturers of hydraulic accessories have no influence at all upon the noise characteristics of a pump. The influencing of air sound and liquids sound, but also that of structure-borne noise is incumbent on the pump design engineer himself.

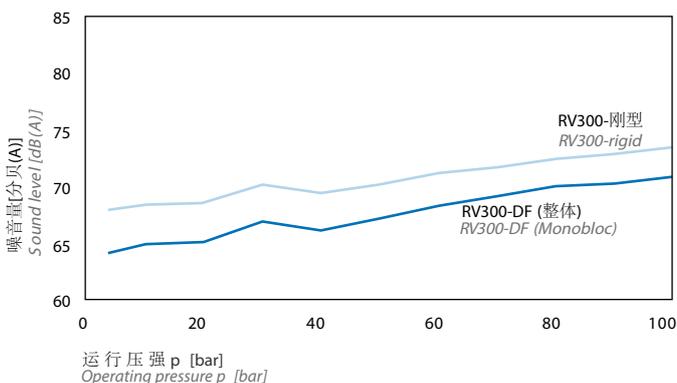
The noise characteristics of a pump – consisting of basic frequency and harmonic waves – can become very annoying, when the structure-borne noise of the hydraulic unit and that of the herewith integrated elements of the machine are propagated. The volume vibration of a pump, and with it the pressure vibration, can cause a particularly unpleasant resonance of the structure, which itself cannot always be expressed, even by means of a sound-pressure level monitoring in form of a dB(A)-value.

In order to prevent the propagation of this vibration into other integrated elements as far as possible, the separation of the structure-borne noises is to be achieved. And, apart from having to use a flexible clutch and pressure piping instead of the conventional one, the structure-borne noises will be essentially separated through the implementation of bellhousings with noise damper. Damper flanges of this type contain an elastomer, which hinders the metallic contact between the pump and the other elements of the hydraulic unit.

The company R+L HYDRAULICS manufactures and distributes damper flanges for the noise reduction of hydraulic units. On account of its many years of experience in this field, R+L HYDRAULICS has developed a monobloc bellhousing system with noise damping (Fig. 4), which offers an essential simplification towards the conventional construction. The connection between the noise damper ring and the bellhousing is now totally made without bolting. What is more, the pump flange is directly combined with the bellhousing by means of a form-conclusive and vulcanised elastomer compound (as well in the sense of rotation as in the radial back-up).

图1 声压级
监测叶轮泵

Fig. 1 Sound-pressure level
monitoring vane pump

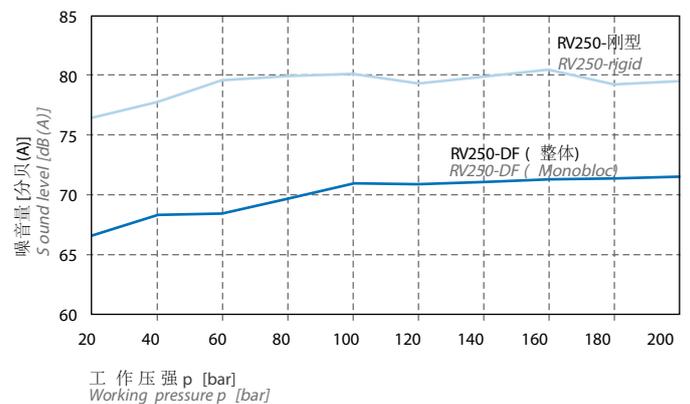


通过以下措施可以显著提高刚性，例如，不考虑一流的降噪特性，电机法兰直径为300mm的整体钟罩与机座号为132的电机连接，其抗拉强度为56kN。刚性越高，偏移越小，将延长联轴器的使用寿命。

整体式钟罩的降噪效果不仅取决于特殊的现场情况，也受到泵噪音特性的影响。泵的噪音越大，降噪幅度就越大。噪音降低幅度通常在低噪音泵3分贝（见图1）到高噪音泵10分贝（见图2）之间。

图2 声压级
监测外齿轮泵

Fig. 2 Sound-pressure level monitoring
external gear pump



A noticeable improvement of the stiffness is the result of this, in spite of first-rate noise damping characteristics i.e. meaning a tensile strength of 56 kN, in the case of a monobloc bellhousing with a motor flange diameter of 300 mm, suitable for an E-motor frame size 132. The higher stiffness results especially in lesser misalignments, which go together with a higher service life of the coupling.

The noise damping effect of the monobloc bellhousing does not only depend on the special field case but also on the noise characteristics of the pump. The more annoying the pump's noise is, the higher the damping degree will be. The spectrum of sound level reduction generally lies between 3 dB(A) in the case of less noisy pumps (Fig. 1) and more than 10 dB(A) by pumps (Fig. 2), which procure a more annoying "noise-experience".

刚型RV Rigid version RV

直径 D1 = 160 – 350 mm
Ø D1 = 160 – 350 mm



图3 钟罩，刚型，按照VDMA 24 561标准

Fig. 3 Bellhousings, rigid, acc. to VDMA 24 561

整体降噪型 Monobloc-System, noise reduction version

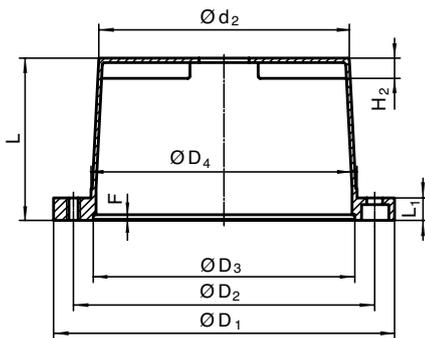
直径 D1 = 250 – 350 mm
Ø D1 = 250 – 350 mm



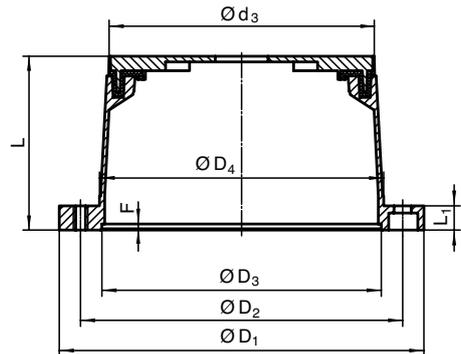
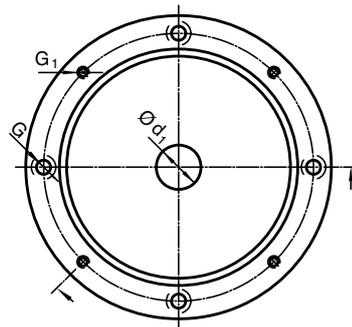
图4 带减振整体型钟罩，按照VDMA 24 561标准，合体无螺钉连接

Fig. 4 Monobloc-Bellhousings with noise damper, acc. to VDMA 24 561 Form fitting without screw joint

RV.../.../...



RV.../.../DF



钟罩型号 Type of bellhousing	电机机座 E-Motor Frame size	功率 Power [kW]	轴径 Shaftend D x l [mm]	支架 Footbracket	D1	D2	D3	D4	d1	d2	d3	L	L1	F	G	G1	H2
RV 160/80/...	71	0.25	14 x 30	PTFL160	160	130	110	110	21	107	-	80	13	4	9	M8	8.5
RV 160/90/...		0.37										90					
RV 200/100/...	80	0.55-0.75	19 x 40	PTFL200	200	165	130	145	36	129	-	100	16	5	11	M10	12.5
RV 200/110/...	90 S+L	1.1-1.5	24 x 50									110					
RV 200/118/...												118					
RV 200/124/...										128		124					
RV 200/140/...												140					
RV 250/120/...	100 L	2.2-3	28 x 60	PTFL250	250	215	180	190	45	178	172	120	19	5	14	M12	14.5
RV 250/124/...	112 M	4		PTFS250								124					
RV 250/128/...												128					
RV 250/135/...												135					
RV 250/148/...											172	148					
RV 250/175/...											176	175					
RV 300/144/...	132 S	5.5	38 x 80	PTFL300	300	265	230	234	50	222	217	144	20	5	14	M12	18
RV 300/150/...	132 M	7.5		PTFS300						221		150					
RV 300/155/...												155					
RV 300/168/...										220		168					
RV 300/196/...										217		196					
RV 350/188/...	160 M+L	11-15	42 x 110	PTFS350	350	300	250	260	41	236	231	188	26	6	18	M16	18
RV 350/204/...	180 M+L	18.5-22	48 x 110						53	234		204					
RV 350/228/...									70	232	228	228					
RV 350/256/...									90	230	226	256					

按照VDMA 24 561 标准，法兰直径为160 mm的钟罩仅用于刚型。法兰直径为200 mm，采用螺钉连接带阻尼法兰，降噪型钟罩，可要求定制。
Bellhousings with flange-Ø D1 = 160 mm acc. to VDMA 24 561 only in rigid version. Noise reduction version with flange-Ø D1 = 200 mm with screwed damping flange on request.

刚型 RV
Rigid version RV

直径D1 = 400 – 800 mm
Ø D1 = 400 – 800 mm



分体降噪型
Noise reduction version, 2-piece

直径 D1 = 400 – 800 mm
Ø D1 = 400 – 800 mm

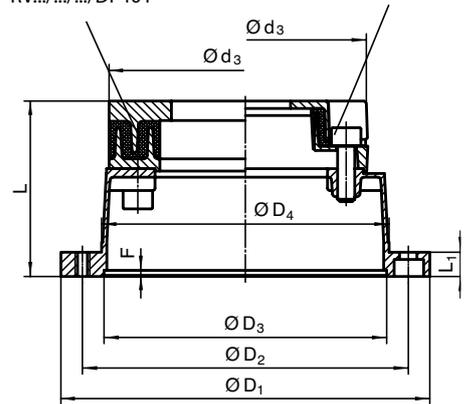
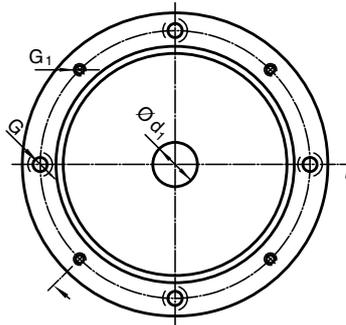
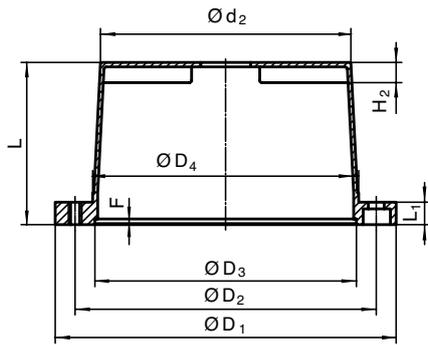


RV.../.../...

从规格450起, 8孔
From Size 450, 8 bores

RV.../.../DF350
RV.../.../DF401

RV.../.../DV400



钟罩型号 Type of bellhousing	电机机座 E-Motor Frame size	功率 Power [kW]	轴径 Shaftend D x l [mm]	支架 Footbracket	D1	D2	D3	D4	d1 min	d1 min	d2	d3	L	L1	F	G	G1	H2		
RV 400/204/...	200 L	30	55 x 110	PTFS400	400	350	300	300	50	50	265	260	204	26	6	18	M16	22		
RV 400/228/...										(DF350)	262	(DF350)	228							
RV 400/256/...										50	259	283	256							
RV 450/234/...	225 S	37	60 x 140	PTFS450	450	400	350	350	80	(DV400)	301	(DV400)	234	26	6	18	M16	20		
RV 450/262/...	225 M									45	80	297	362	262						
RV 450/285/...											(DF401)	276	(DF401)	285						
RV 450/315/...												315								
RV 550/248/...	250 M	55	65 x 140	PTS5500	550	500	450	450	80		362		248	26	6	18	M16	20		
RV 550/265/...	280 S+M	75 - 90	75 x 140								359		265							
RV 550/275/...											276		275							
RV 550/295/...													295							
RV 550/315/...												315								
RV 660/310/...	315 S+M+L	110 - 132	80 x 170	PTS660	660	600	550	550	80		414		310	32	6	23	M20	20		
RV 660/330/...		160 - 200										276		330						
RV 660/345/...														345						
RV 800/315/...**	355 L	250 - 315	95 x 170	—	800	740	680	680	125		468		315	60	10	23	M20	35		
RV 800/335/...**	400 L		100 x 210								474		335							
RV 800/350/...**											485		350							
RV 800/443/...**											490		443							

** 不在VDMA标准内 **Not included in the VDMA-Standard

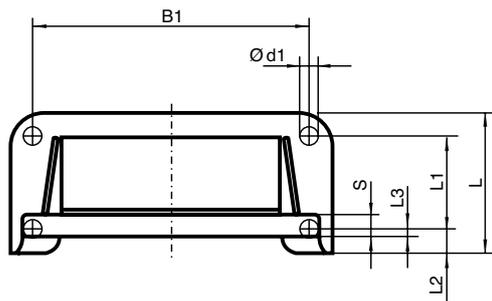
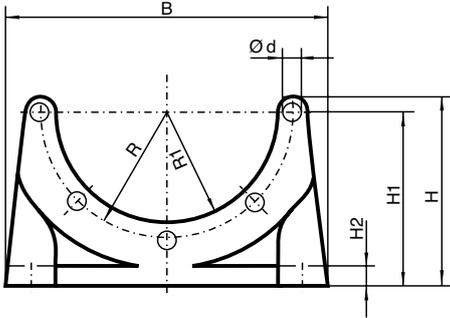
PTFL / PTFS系列支架

按照 VDMA 24 561标准, 用于钟罩, IM B5电机

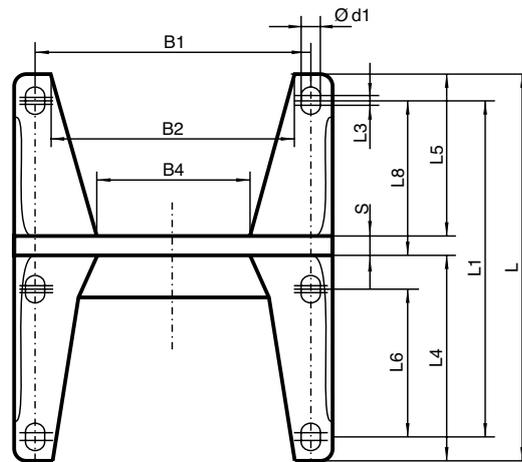
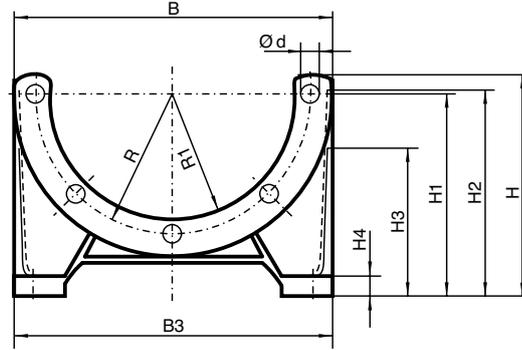
Footbracket series PTFL / PTFS

acc. to VDMA 24 561 for bellhousings, motor type IM B5

PTFL 轻型 PTFL Light version



PTFS 重型 PTFS Heavy duty version



型号 Type	B	B1	B2	B3	B4	L	L1	L2	L3	L4	L5	L6	H	H1	H2	H3	H4	R	R1	S	d	d1	L	L8
PTFL 160	160	140	-	-	-	80	50	15	7	-	-	-	108	100	10	-	-	65	55	12	9	9	-	-
PTFL 200	210	180	-	-	-	90	60	15	4	-	-	-	122	112	12	-	-	82.5	72.5	14	11	11	-	-
PTFL 250	250	220	-	-	-	110	60	25	21	-	-	-	145	132	15	-	-	107.5	95	19	14	14	-	-
PTFL 300	290	260	-	-	-	120	80	24	20	-	-	-	172	160	20	-	-	132.5	117	18	14	14	-	-
PTFS 250	250	215	193	250	162	260	185	-	10	147.5	67.5	110	167	155	155	120	15	107.5	95.15	15	14	14	15	60
PTFS 300	300	265	243	300	207	270	225	-	10	172	80	130	197	185	185	145	18	132.5	117.25	18	14	14	20	75
PTFS 350	350	300	260	350	210	305	265	-	12	195	92	150	255	235	235	184	18	150	130	18	18	18	25	90
PTFS 400	400	350	320	400	260	350	300	-	12	225	105	-	277	260	232	220	20	175	151	20	18	18	-	100
PTFS 450	450	400	364	450	317	385	335	-	12	250	113	-	312	295	272	238	20	200	176	22	18	18	-	110
PTFS 550	550	500	454	550	401	465	415	-	12	300	140	-	365	350	335	285	25	250	226	25	18	18	-	140
PTFS 660	660	600	550	660	486	555	495	-	18	360	165	-	400	380	360	308	30	300	276	30	22	22	-	165

PTFS 800可要求定制。
请参照安装说明。钟罩必须安装在支架的所有安装孔上, 以确保PTFL/PTFS系列支架具有最大负载能力。

PTFS 800 on request.

Please note our assembly instruction. The bellhousing must be assembled with all mounting holes of the foot bracket, to ensure the maximum loading capacity of the PTFL/PTFS!

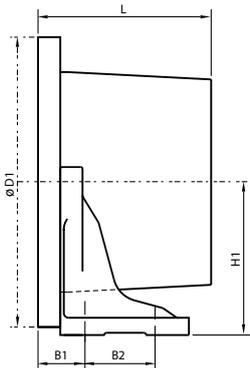
安装支架的优点

Advantages of footbracket assembly

1. 减少IM B5/V1电机（无底座）库存。
2. 电机容易更换。
3. 无电机时也能安装泵和管道。
4. 电机无需垫片。

1. Storage reduction to electric-motors, frame IM B5/V1 (without feet).
2. Simple exchange of the electric-motor.
3. Assembly of pump and pipes without electric-motors possible.
4. No shimming of motor-feet.

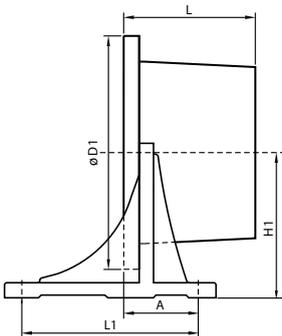
PTFL轻型 Light version



电机机座规格 Frame Size	带座法兰 Footflange	法兰 Flange				
		Ø D1	B7	B2	H1	L
71	PTFL 160	160	20	50	100	见钟罩图 see bellhousing diagram
80	PTFL 200	200	20	60	112	
90 S+L						
100 L	PTFL 250	250	40	60	132	
112 M						
132 S+M	PTFL 300	300	40	80	160	

PTFS重型

Heavy duty version PTFS



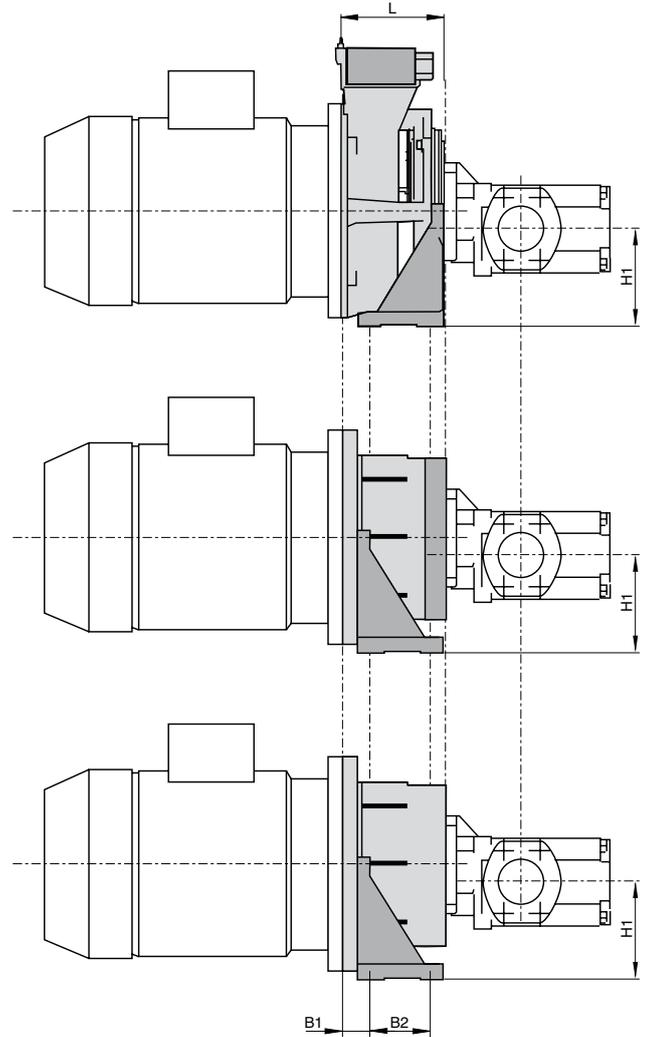
电机机座规格 Frame Size	带座法兰 Footflange	法兰 Flange				
		Ø D1	A	L7	H1	L
100 L	PTFS 250	250	79	185	155	见钟罩图 see bellhousing diagram
112 M						
132 S+M	PTFS 300	300	95	225	185	
160 M	PTFS 350	350	116	265	235	
180 L						
200 L	PTFS 400	400	126	300	260	
225 S+M	PTFS 450	450	136	335	295	
250 M	PTFS 550	550	166	415	350	
280 S+M						
315 S+M+L	PTFS 660	660	197	495	380	

R+L 全面解决方案—刚型，减振型，冷却型

使用PTFL系列支架时，L, B1, B2, H1尺寸相同。

R+L HYDRAULICS – the general solution concept rigid, dampened, cooled

Identical dimensions L, B1, B2, H1 in case of using footbrackets series PTFL.



新 NEW

铸铁钟罩
Bellhousings made of cast iron

刚型 GG-RV
Rigid version GG-RV

材质: EN-GJL-250
Material: EN-GJL-250

直径D1 = 250 – 660 mm
ØD1 = 250 – 660 mm

备有库存
Available from stock

其它规格可定制
Other sizes on request

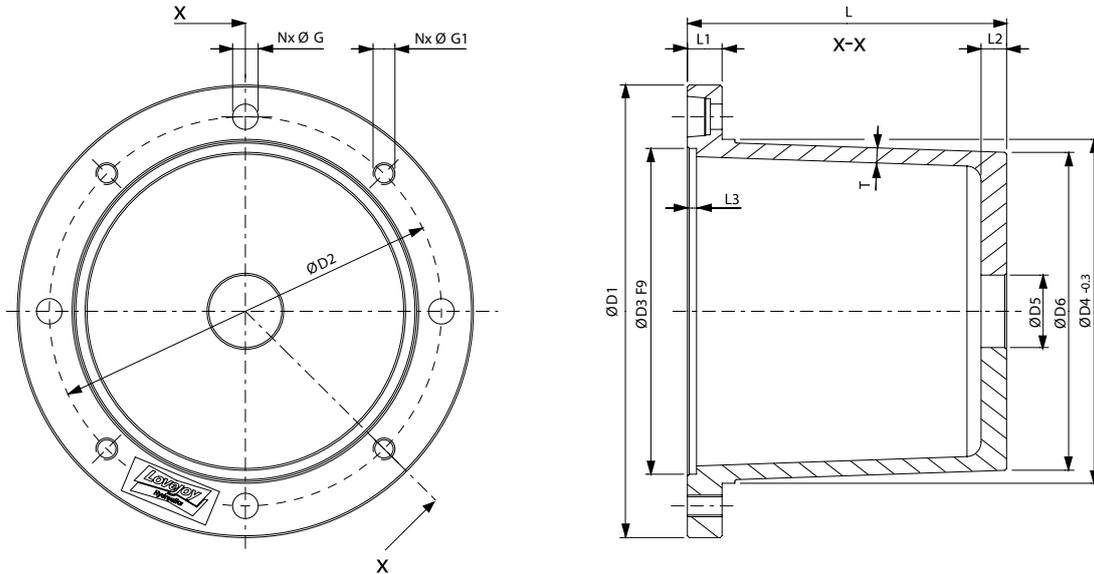
参阅操作手册
Respect operation manual



铸铁钟罩专门用于以下场合:
Bellhousings made of cast iron are especially developed for the following applications:

- 高负载
- High loads
- 移动式液压
- Mobile hydraulic
- 矿采, 近海设备
- Mining, Offshore
- 伺服驱动
- Servomotorically drives

重量轻, 降噪性能优异。
Based on the high weight, good noise reduction performance.



GG-PT 钟罩
Bellhousings GG-PT

钟罩型号 Type of bellhousing	电机机座规格 Frame size	功率 Power [kW]	轴径 Shaft end Dxl [mm]	支架型号 Type of foot bracket	D1	D2	D3	D4	D5	D6	T	L	L1	L2	L3	N	G	G1	重量 Weight [kg]
GG-RV250/175/...	112 M	4	28 x 60	GG-PTFS 250	250	215	180	190	40	176	10	175	19	14	5	4	14	M12	10.50
GG-RV300/144/...	132 S	5.5	38 x 80	GG-PTFS 300	300	265	230	234	50	222	10	144	20	16	5	4	14	M12	13.00
GG-RV300/196/...	132 M	7.5							75	218		196							15.00
GG-RV350/188/...	160 M+L	11 + 15	42 x 110	GG-PTFS 350	350	300	250	260	40	245	10	188	26	18	6	4	18	M16	20.50
GG-RV350/204/...	180 M+L	18.5 + 22	48 x 110						50	244		204							21.00
GG-RV350/228/...									65	243		228							22.00
GG-RV350/256/...									85	241		256							23.50
GG-RV400/204/...	200 L	30	55 x 110	GG-PTFS 400	400	350	300	300	45	284	10	204	26	20	6	4	18	M16	28.00
GG-RV400/228/...										283		228							28.50
GG-RV450/234/...	225 S	37	60 x 140	GG-PTFS 450	450	400	350	350	50	332	10	234	26	20	6	8	18	M16	36.00
GG-RV450/262/...	225 M	45							80	330		262							37.50
GG-RV550/248/...	250 M	55	65 x 140	GG-PTFS 550	550	500	450	450	80	431	10	248	26	20	6	8	18	M16	53.00
GG-RV550/265/...	280 S+M	75 + 90	75 x 140							430		265							53.50
GG-RV660/330/...	315 S+M+L	160 + 200	80 x 170	GG-PTFS 660	660	600	550	550	80	526	10	330	32	24	6	8	23	M20	86.00

漏油孔/观察孔需分别在订单中指明。
Leakage- or inspection holes respectively have to be specified with the order.

新 NEW

铸铁支架
Footbrackets made of cast iron

材质: EN-GJL-250
Material: EN-GJL-250

B = 250 – 660 mm
B = 250 – 660 mm

备有库存
Available from stock

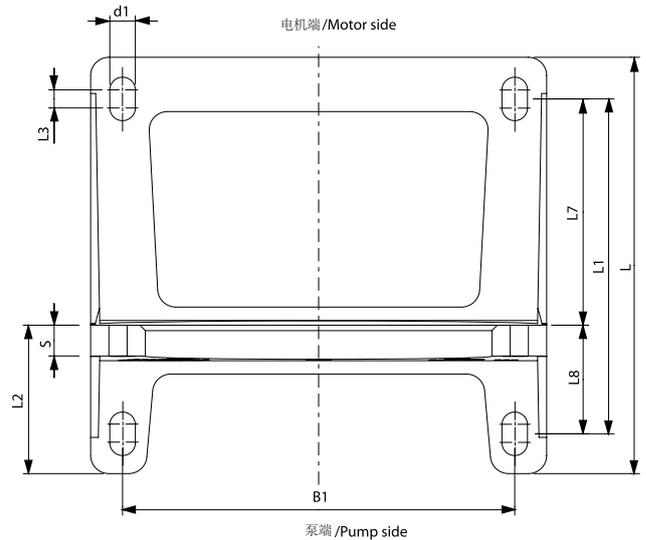
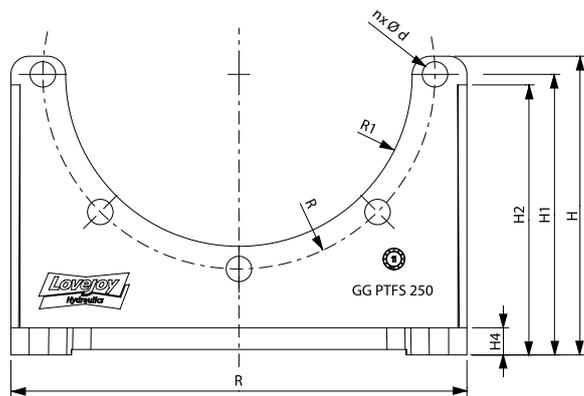
其它规格可定制
Other sizes on request

遵守操作手册
Respect operation manual



铸铁支架专门用于以下场合:
Footbrackets made of cast iron are especially developed for the following applications:

- 高负载
- High loads
- 移动式液压
- Mobile hydraulic
- 矿采, 近海
- Mining, Offshore
- 伺服驱动
- Servomotorically drives



GG-PTFS 支架
Footbrackets GG-PTFS

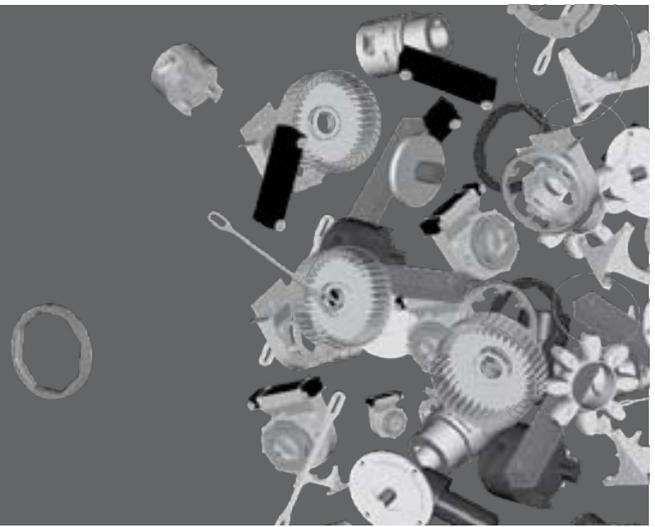
型号 Type	适用钟罩 for bellhousing	B	B1	L	L1	L2	L3	L7	L8	H	H1	H2	H4	R	R1	S	n	d	d1	重量 Weight [kg]
GG-PTFS 250	RV250/.../...	250	215	260	185	82	10	125	60	167	155	155	15	107.5	95.25	15	5	14	14	5.50
GG-PTFS 300	RV300/.../...	300	265	270	225	98	10	150	75	197	185	185	18	132.5	117.25	18	5	14	14	9.50
GG-PTFS 350	RV350/.../...	350	300	305	265	110	12	175	90	255	235	235	18	150	130.5	18	5	18	18	17.50
GG-PTFS 400	RV400/.../...	400	350	350	300	125	12	200	100	277	260	232	20	175	150.5	20	5	18	18	22.00
GG-PTFS 450	RV450/.../...	450	400	385	335	133	12	225	110	312	295	272	20	200	176	22	9	18	18	28.00
GG-PTFS 550	RV550/.../...	550	500	465	415	165	12	275	140	365	350	335	25	250	226	25	9	18	18	43.50
GG-PTFS 660	RV660/.../...	660	600	555	495	195	18	330	165	400	380	360	30	300	276	30	9	22	22	61.50

仅在所有安装孔都使用时才能达到全负载能力。
The full load capacity are reached only if all mounting holes are used!

浪费时间 WASTED TIME

寻找单独的元件

Looking for individual components



节约时间的礼物 THE GIFT OF TIME

在线3D装配软件

Configure 3D assembly groups online

FLUIDWARE®3D软件能使设计工程师每一天的工作变得非常容易并节省大量时间。该软件有别于普通的配置工具，因为它支持设计工程师，通过少数明显的选择步骤和执行仅有的可行选项，就能找到正确的元件。

FLUIDWARE®3D makes the design engineer's work much easier and thus saves valuable time – each and every day. FLUIDWARE®3D distinguishes itself from ordinary configuration tools because it supports the design engineer in the search for the correct components by requiring only a few sensible selection steps and performing only the feasible options.



www.fluidware3d.com

FLUIDWARE® 3D
ACCELERATING YOUR PROGRESS

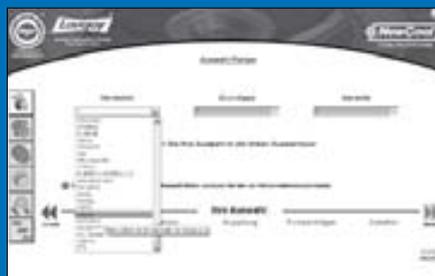
3D元件组三步骤

3D Component Groups in three steps



步骤1: 注册

Step 1: Registration



步骤2: 配置

Step 2: Configuration



步骤3: 下载文件

Step 3: File-download

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