

◆ 尊敬的用户:

感谢您选用我公司的产品。您在使用本产品以前, 请仔细阅读本使用说明书, 并严格按照使用说明书进行操作。

如有不明之处, 需及时与我公司联系, 谨防操作中出現意外事故。

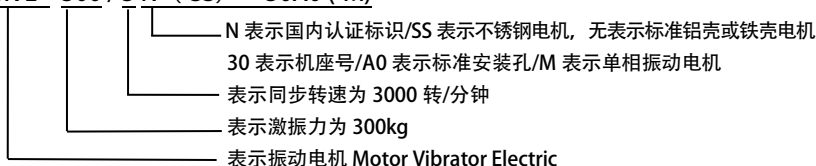
◆ 型号说明

本振动电机说明书包括所有卧式安装振动源电机, 即三相/单相、交流/直流等。各类卧式安装的型号说明如下。

*交流振动电机:

MVE 激振力 (kg) / 转速 特殊符号

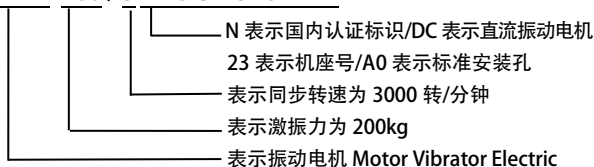
例如: MVE 300 / 3 N (-SS) - 30A0 (-M)



*直流振动电机:

MVE 激振力 (kg) / 转速 特殊符号

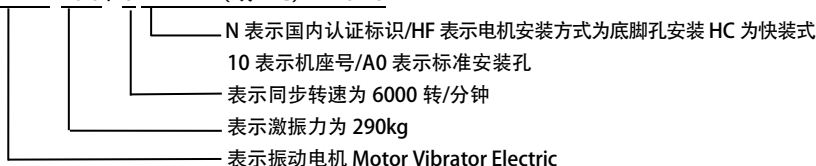
例如: MVE 200 / 3 N - DC - 23A0 - 12V



*高频振动电机:

MVE 激振力 (kg) / 转速 特殊符号

例如: MVE 290 / 6 N - HF (或 HC) - 10A0



◆ 振动电机使用条件

1、适用环境温度: $-20^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$ 。避免在低于 -20°C 的温度下存放。

2、海拔: 不超过 1000 米。

3、频率: 除高频、直流电机外, 标准电机是 50 Hz 或 60 Hz, 高频电机频率包括: 100 Hz 或 120 Hz 或 150 Hz 或 200 Hz。(也可按用户特殊要求设计制造, 注意铭牌标征数据应和电源对应)。



4、额定电压：除高频、直流、单相电机外电机功率 $<4\text{kW}$ 时为 $220/380\text{V}$ ，即“ Δ ”/“ Y ”接法，出厂时按 380V ，“ Y ”接法；电机功率 $\geq 4\text{kW}$ 时为 $380/660\text{V}$ ，即“ Δ ”/“ Y ”接法，出厂时按 380V ，“ Δ ”接法。高频电机电压为 $220/380\text{V}$ 或 42V ，直流电机电压为 24V 或 12V 或 36V ，单相电机电压为 $220\sim 230\text{V}$ 或 $110\sim 115\text{V}$ （也可按用户特殊要求设计制造，注意电源电压应和铭牌或接线图中的接线方法相对应）

5、绝缘等级：F级。

6、防护等级：IP66。

7、工作方式：S1（连续）。

◆ 贮存与运输

1、本公司生产的振动电机 SIZE10~60 均采用塑料袋及外加纸箱包装，SIZE70~130 采用塑料袋及外加木箱包装，并用自攻螺钉将振动电机 SIZE70~130 固定在木箱上，建议用户在贮存过程中不要拆开包装物，确保贮存环境干燥通风，避免环境温度急剧变化。

2、贮存和运输过程中，振动电机不可倒置。

重要说明：振动电机在运输过程中造成的损坏应及时与运输公司确认，并将信息反馈至我公司，以便我公司与运输公司交涉。

◆ 振动电机安装

警告！在安装振动电机前，应切断和锁定供给设备的所有能源，并给出警告标志。所有操作必须有专业人员经授权后进行。

1、安装前应检查运输中是否碰伤或受潮、紧固件有无松动等现象。尤其是振动电机在仓库里放置了很长时间（超过了 24 个月），我们建议拆下一侧偏心块护罩，并检查转子是否能自由旋转。还要通过绝缘电阻测试，冷态绝缘电阻不低于 $100\text{M}\Omega$ 。如发现异常，请与本公司联系。

2、检查铭牌数据是否符合要求，在用户没有特殊要求的情况下，本公司出品的振动电机的偏心块位置均处于铭牌标征的最大激振力位置。

3、振动电机的安装表面如图 1 必须坚固、平整；安装表面的平面度应低于 0.25mm （这样，在拧紧安装螺栓时，可使振动电机壳体产生的内应力最小），该平板不应有气孔、裂纹；安装表面不小于振动电机底脚面；应避免在安装表面区域进行焊接，否则会影响振动电机安装表面的平面度。

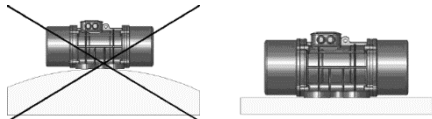


图 1 振动电机安装表面

4、一定要确保安装表面没有油漆和杂物，确保振动电机底脚面清洁。

小心！当振动电机已经安装并接线后，不得在安装板上进行焊接。焊接有可能导致振动电机

绕组和轴承损坏。

5、振动电机四个底脚螺栓应根据孔径选用相应不低于 8.8 级的高强度螺栓，用扳手可靠紧固并采用防松措施，不可有任何松动。SIZE10~50 应采用平垫的防松结构。SIZE60~130 一般应采用平垫加双螺母紧固并防松。按图 2 所示的次序拧紧装配螺栓。如果未按规定次序拧紧，将有可能导致振动电机损坏。将振动电机安装到安装板上之前，应在所有的螺栓上涂以螺纹胶。

6、表 1 中已给出了各类相关螺栓的拧紧力矩，用户在安装时务必按相对应的力矩拧紧底脚螺栓。

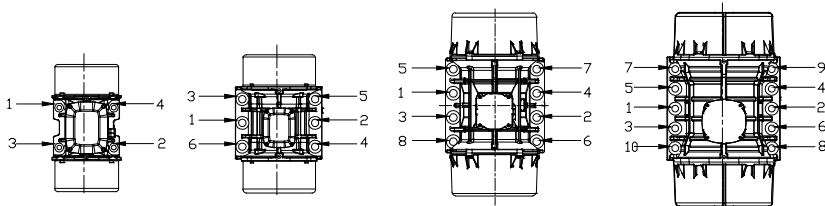


图 2 紧固螺栓拧紧次序

表 1 紧固螺栓和拧紧力矩要求

公制			
螺栓规格	Nm	螺栓规格	Nm
M6	9	M8	23
M10	45	M12	80
M16	185	M20	373
M22	550	M24	696
M27	873	M36	1864
M42	2850	/	/

7、MVE 系列振动电机在接近接线盒处均有防跌安装孔。当用户将振动电机安装离地高于 0.2 米时，建议按如图 3 用链钩栓紧，以防振动电机四或六个底脚螺栓松动时下跌，造成设备损坏及安全事故发生。

8、振动电机试运转 10 至 20 分钟后，检查螺栓拧紧力矩。必要时应再次拧紧。



图 3 振动电机防跌装置

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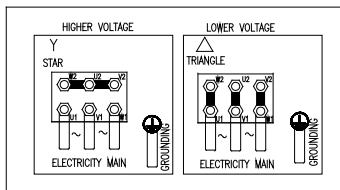
◆ 振动电机接线

1、您可以在我公司振动电机的铭牌上或接线盒盖板背面发现与图 4 或图 5 相似的接线图。

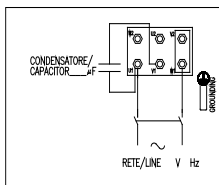
2、先将电源线穿过电缆接头，剥线后将线头绞紧穿入接线端子，并用冷压钳压紧，不得有散铜丝外露、突出。

3、为了使电缆线和电缆接头密封联接且可靠，电缆线应采用四芯电缆，其中一根为黄绿双色接地线。电缆接头锁紧范围及电缆线导体标称截面见表 II。

小心！在将电源线接在振动电机上之前，应确保电源线耐压等级一定要等于或大于您所操作的振动机电压。其最高额定温度为 105℃，最小线径如表 II 所示。如果电源线直径选取不当，电缆接头将无法夹紧到位，振动电机将会因潮湿或因材料聚积在接线盒内而导致损坏。如果电源线损坏，将会引起电源短路或接地短路，从而导致振动电机损坏。



三相



单相

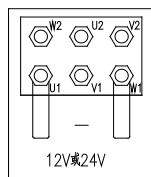


图 5 直流振动电机接线

图 4 交流振动电机接线图

表 II 电缆接头锁紧范围和电缆线标称截面

电缆接头规格	锁紧范围(mm)	电缆线导体标称截面	接线端子	备注
M16x1.5	$\varphi 4\sim 8$	4-0.5	0.5-5	SIZE10
M20x1.5	$\varphi 6\sim 12$	4-0.5	0.5-5	SIZE20-30
M20x1.5	$\varphi 6\sim 12$	4-1.5	1.5-5	SIZE40-50
M25x1.5	$\varphi 9\sim 16$	4-2.5	2.5-5	SIZE60-70
M32x1.5	$\varphi 13\sim 20$	4-4	4-6	SIZE75-80
M32*1.5	$\varphi 16\sim 22$	4-6	6-6	SIZE85-90
		4-6	6-8	SIZE100-105
		4-6	6-10	SIZE110
M32*1.5	$\varphi 19\sim 26.5$	3-10+1-6(接地线)	10-10	SIZE120-130

4、请严格按图接线，注意三相交流电机电源线中的黄绿双色线应可靠接地，以防接线错误导致危及人身安全和电机烧坏，且该接地线应该总是比其它三根线长，以保证发生电缆线断裂时该线最后断裂。

- 5、单相振动电机使用电容应与铭牌上电容规格相同, 电容直接在电机外部不受振动的部位。
- 6、接线端子如图 6 装入接线螺母后, 压上专用的防松垫圈, 再用接线螺母 (螺母拧紧力矩要求见表 III) 充分拧紧, 注意接线端子的相互位置, 保证电气间隙 $\geq 8\text{mm}$ 。

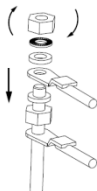


图 6 电缆线接线

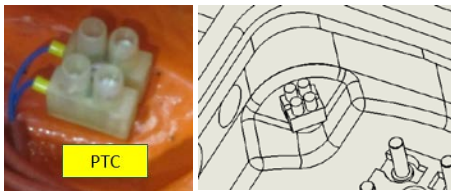



图 6.1 PTC 热敏电阻

- 7、根据所需电缆线的长度拧紧电缆接头, 然后再拧紧螺母。注意电缆接头的内置密封圈应紧套在电缆橡皮保护层上。

表 III 接线板螺母规格与拧紧力矩要求

	Nm	ft*lb
M5	4	2.95
M6	5	3.69
M8	6	4.43
M10	8	5.90

重要说明: 在振动电机接线时, 电源线应保持一定的松弛状态。这样, 在振动电机振动过程中, 电源线才不至于过分张紧, 从而导致接线内部产生应力。当在潮湿环境下使用时, 应使电源线保持足够的松弛状态, 以防凝结水沿电源线流向振动电机。

- 8、振动电机使用时应根据电流大小配有相应的过载保护或短路保护装置。同时尽量避免一个保护装置同时控制二台或三台以上的振动电机。

9、除接线盒全灌封电机外, 标准 SIZE60-130 电机接线盒内装有 PTC 热敏电阻如图 6.1, 用户可根据需要接温控模块。

◆ 检查轴的转动情况

- 1、打开振动电机端罩, 注意保护“O”型密封圈。

小心! 尽量不要卸下偏心块, 如有需要, 当偏心块卸下后, 不得使振动电机运转。偏心块卸下后运转振动电机, 将有可能导致轴承损坏。

警告! 在卸下端罩的条件下检查轴的转动情况时, 不得用手接触回转部件, 否则将有可能造成手指受伤。

- 2、启动振动电机 1 秒钟, 然后停止。

3、注意观察振动电机转动方向。如果振动电机转动方向需要调整, 应先切断并锁定电源/给出警告标志, 再通过接线位置更换来改变振动电机转动方向, 详见图 7。

振动电机偏心块的调整

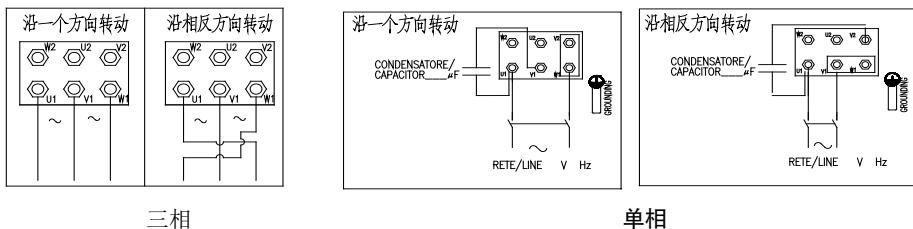


图 7 振动电机改变转动方向接线图

4、重新装好端罩，注意不要丢弃或挤出“O”型密封圈，这样会大大降低电机密封性能。

◆ 振动电机偏心块的调整

注意：所有的 MVE 系列振动电机在每个轴端均带有一组偏心块。偏心块出厂时设定为 100%。偏心块指示牌上的百分比增量代表铭牌上以 kg 为单位给出的额定频率下总激振力的百分比。比如，如果铭牌上给出 700kg 激振力，设定在 50%处，将产生 350kg 激振力。

1、如果您需要调整振动电机的激振力，您可以通过对偏心块角度的调整来对振动电机的激振力进行调整。

警告！在调整偏心块之前，应切断振动电机电源并锁定/给出警告标志。

2、打开振动电机端罩，注意保护“O”型密封圈。

3、标准振动电机片状偏心块振动电机激振力调整：松开偏心块的紧固螺母。调整后激振力的变化情况见表 IV，拧紧力矩详见表 V。

注意：激振力调整时应保证振动电机两边偏心块调整数量相同，否则将大大影响振动电机使用寿命和振动效果，并导致振动电机损坏！

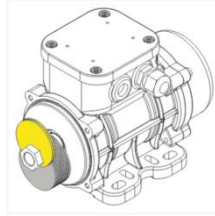
表 IV 片状偏心块调整

片状偏心块总数	5+5	8+8	7+7	9+9	10+10	12+12
两边各翻起一片所减少的激振力(额定激振力%)	40	25	28.6	22.2	20	16.7

3.1 高频电机偏心块调节的激振力方式。

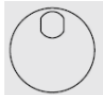





100%激振力



正确调节

MVE290/N-HF-10A0 示例图

MVE 290/6N-HF-10A0				MVE 1530/6N-HF-38E0 MVE 1530/6N-HC-38A0			
200HZ				200HZ			
偏心块	$\Phi 48 \times 2$ 共18PC			偏心块	R63*2 共12PC		
百分比	方式	kg	Lb	百分比	方式	kg	Lb
100%	每边9片	297	655	100%	每边6片	1373	3027
75%	每边向上翻1片	222	491	76%	每边向上翻1片或5片	1043	2300
55.5%	每边向上翻2片	164	363	58%	每边向上翻2片或4片	796	1755
33.3%	每边向上翻3片	98	218	50%	每边向上翻3片	686	1513

MVE 2000/6N-HC-50A0				MVE 2000/9N-HF-53A0 MVE 2000/9N-HC-50A0			
200HZ				150HZ			
偏心块	R73*3 共8PC			偏心块	R73*1.5 共8PC		
百分比	方式	kg	Lb	百分比	方式	kg	Lb
100%	每边4片	1907	4204	100%	每边4片	2156	4753
75%	每边去掉1片	1430	3153	75%	每边去掉1片	1617	3564
50%	每边向上翻1片	953	2102	50%	每边向上翻1片	1078	2376



MVE 1300/6N-HF-50A0 MVE 1300/6N-HF-53A0 MVE 1300/6N-HC-50A0				MVE 2400/6N-HF-53A0			
200HZ				200HZ			
偏心块	R73*3 共10PC			偏心块	R73*3 共10PC		
百分比	方式	kg	Lb	百分比	方式	kg	Lb
100%	每边向上翻1片	1430	3153	100%	每边5片	2383	5254
66.7%	每边去掉1片向上翻1片	953	2101	60%	每边向上翻1片	1430	3153
33.3%	每边向上翻2片	477	1052	20%	每边向上翻2片	477	1051

MVE 1300/6N-HF-50A0 MVE 1300/6N-HF-53A0 MVE 1300/6N-HC-50A0				MVE 2000/6N-HF-53A0							
100HZ				100HZ							
偏心块	R73*3 共10PC			偏心块	R73*3 共8PC						
Hz	rpm	百分比	方式	kg	Lb	Hz	rpm	百分比	方式	kg	Lb
100	6000	100%	每边向上翻1片	1430	3153	100	6000	100%	每边4片	1907	4203
90	5400	81%	每边向上翻1片	1158	2554	90	5400	81%	每边增加1片	1930	4256
80	4800	64%	每边向上翻1片	915	2018	80	4800	64%	每边增加1片	1525	3363
70	4200	82%	每边5片	1168	2575	70	4200	82%	每边增加1片	1168	2575
60	3600	60%	每边5片	858	1892	60	3600	60%	每边增加1片	858	1892
50	3000	42%	每边5片	596	1314	50	3000	42%	每边增加1片	596	1314
40	2400	27%	每边5片	381	841	40	2400	27%	每边增加1片	381	841
30	1800	15%	每边5片	215	473	30	1800	15%	每边增加1片	214	473
20	1200	7%	每边5片	95	210	20	1200	7%	每边增加1片	95	210

4、标准振动电机圆形偏心块激振力的调整（见图 8）

4.1 松开可调(从动)偏心块（序 3）的夹紧螺钉（序 2），偏心块在转轴上能自由旋转即可，不需要取下轴头两端的卡簧及拧松靠近端盖处的固定(主动)偏心块（序 5）的夹紧螺钉。

4.2 按需要激振力对偏心块进行调整。当偏心块槽口中心线（序 4）与圆形偏心块指示牌（序 1）（SIZE20~50 圆形偏心块指示牌是双频率，即 50/60Hz；SIZE60 圆形偏心块指示牌是单频率，即 50Hz 或 60Hz）50Hz 或 60Hz “100%” 刻度线对准时，表示在 50Hz 或 60Hz 情况下激振力最大；而与 “0%” 刻度线对准时则激振力为零。

4.3 设原最大激振力为 F_c ，当偏心块槽口中心线与圆形偏心块指示牌 50Hz 的 “80%” 刻度线对准时，则调整后的激振力为 50Hz 的 $F_{c80\%}$ ，详见图 8。

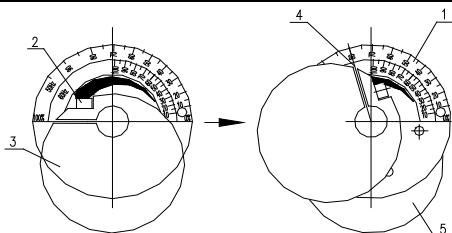


图 8 圆形偏心块激振力调整

4.4 激振力调整后应将两端偏心块的夹紧螺钉充分拧紧，最小拧紧力矩详见表 V，最大拧紧力矩为最小拧紧力矩的 1.05~1.1 倍。

5、扇形偏心块振动电机激振力的调整（见图 9）；

5.1 松开可调（从动）偏心块（序 3）的夹紧螺钉（序 2）。偏心块在转轴上能自由旋转即可。不需要取下轴头两端的卡簧及拧松靠近端盖处的固定（主动）偏心块（序 4）的夹紧螺钉（序 5）。

5.2 按需要激振力对偏心块进行调整。当偏心块一直边与扇形偏心块指示牌（序 1）(SIZE20~50 的 2、4、6P 扇形偏心块指示牌是双频率，即 50/60Hz；SIZE40、50 的 8 极，SIZE60~110 扇形偏心块指示牌是单频率，即 50Hz 或 60Hz)50Hz 或 60Hz “100%” 刻度线对准时，表示在 50Hz 或 60Hz 情况下激振力最大；而与 “0%” 刻度线对准时则激振力为零。

5.3 设原最大激振力为 F_c 。当偏心块一直边与激振力指示牌 50Hz 的 “80%” 刻度线对准时，则调整后的激振力为 50Hz 的 $F_c \times 80\%$ ，详见图 9。

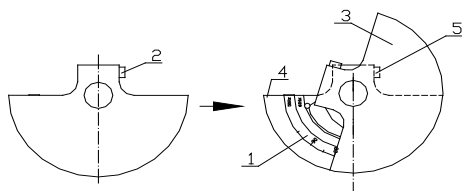


图 9 扇形偏心块激振力调整

5.4 激振力调整后应将两端偏心块的夹紧螺钉（或螺母）充分拧紧，拧紧力矩一般根据夹紧螺钉螺纹而定，详见表 V。

表 V 偏心块紧固螺钉与最小拧紧力矩要求

螺钉/螺母规格	M6	M8	M10	M12	M14	M16	M20	M15*1 螺母	M12 螺母	M24 螺母
拧紧力矩 Nm	11	22	52	95	160	175	350	50	60	80

6、装上端罩，并拧紧端罩装配螺钉。

注意：偏心块拧紧后。为避免转子转动不灵活，烧坏电机，建议用铜棒（即较软的金属棒）或木锤轻轻敲转子轴端，使其灵活转动。

注意：激振力调整时应保证振动电机两边偏心块调整角度相同，即两边偏心块应调整在相同的设定值位置（镜像）如图 10，否则激振力将会不均匀，将大大影响振动电机使用寿命和振动效果，并导致振动电机损坏！

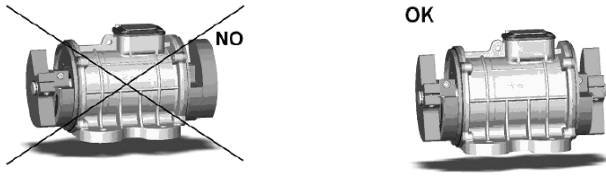


图 10 两边偏心块配重设定值位置应形成镜像

◆ 振动电机首次启动/检查线电流

1、接通电源开关，主电机运转 10 至 20 分钟。

2、如果振动电机出现异常声响或过大的噪音，应确认安装螺栓已经拧紧，安装件焊接无损坏。

警告！安装在结构上的振动电机在运转过程中，会产生较大的噪音。在运转过程中，检查振动电机噪声分贝级。

3、在运转过程中，检查电机振动噪声分贝级。

小心！振动电机工作电流不得超过铭牌上标明的额定值。如果振动电机在连续工作时，线电流超过铭牌上的额定值，将有可能导致振动电机损坏。

4、经过几个小时的运转后，检查每根接线的线电流。如果读数超过铭牌给出的额定值，应减小偏心配重设定值，进一步紧固安装件，或将振动电机移至刚度更大的位置。经过调整后，再次检查线电流，确保线电流不超过铭牌上给出的额定值。

小心！不得使振动电机在超过铭牌上规定的频率范围工作，否则将有可能导致振动电机损坏。在整个频率范围内，确认线电流不超过铭牌上规定的额定值。

注：振动电机的额定输出功率=额定输入功率×效率。

5、经过首次 8 个小时的使用后，应定期检查安装螺栓拧紧力矩，必要时拧紧。

◆ 维护与保养

1、我公司生产的小功率振动电机均采用国际知名品牌振动源专用深沟球轴承，已注入专用的润滑油脂，正常工作，无需维护。

2、大功率振动电机（MVE1300/3、MVE1100/15、SIZE60~SIZE130）采用能承受径向大负荷的专用振动源单列圆柱滚子轴承，其维护及保养注意事项如下：

2.1、为了减少内部摩擦及磨损，防止烧伤，电机装配前已在轴承内部空间填充了适量按表 VI 中对应的专用高温润滑脂。

小心!振动电机只能使用“表 VI”中对应的专用高温润滑脂。如果使用其它润滑脂,将有可能导致振动电机损坏,并使保证条件失效。必须按规定的润滑脂用量润滑振动电机。如果用油量过多,将有可能引起轴承过热,并导致轴承过早失效。

2.2、振动电机应注意轴承润滑,每隔半个月监测轴承温度(最好用电阻温度计)。若轴承温度上升 10℃以上表明可能轴承润滑不足,需用加油枪从注油孔注入表 VI 中对应的专用高温润滑脂。

2.3、为确保轴承正常工作,必须采用表 VI 中对应的专用高温润滑脂,电机每运行 2000 小时后,就必须按表 VI 填充对应的专用高温润滑脂一次。在加入新鲜润滑脂以前,应用清洁的抹布将注油嘴周围的振动电机壳体擦拭干净,注油枪插在注油嘴上,加注润滑脂。正常情况下,轴承在刚润滑或再润滑过后会有自然的温度上升并持续一或二天。

小心!当设备以 3600 转/分钟的速度连续运转或长时间工作,应缩短润滑周期,并按步骤 2.4 给出的用量润滑。否则,将有可能使轴承在无润滑状态下工作,并造成设备损坏。

2.4、如果振动电机壳体温度超过 90℃,应以不小于 90℃时的规定值为基数,温度每超过 10℃,润滑时间缩短一半,润滑脂用量也减少一半。比如, MVE1400/15 振动电机壳体温度达到 96℃时,轴承每工作 1000 小时,每个轴承应加 3 克润滑脂(最高允许轴承温度为 120℃)。当电机壳体温度超过 100℃时,应向欧力-卧龙公司咨询。

2.5、为防止灰尘进入注油孔,损伤轴承,平时应用油杯封住注油孔。

2.6、每个轴承中填充或更换润滑脂的重量(g),应按下表 VI:

表 VI 润滑脂牌号及填充或更换量 (g)

机座	电机型号	润滑脂牌号	填充	更换
SIZE50、53A0	MVE1300/6 2000/6 2400/6 2000/9	KLUBER-NB52	免维护	14
SIZE50(2P)	MVE1300/3	MOBIL SHC POLYREX 102EM 或 SKF LGHP2 (具体牌号请按电机表面 不锈钢标牌 为准)	免维护	10
SIZE50(4P)	MVE1100/15		免维护	11
SIZE60(2P)	MVE1600/3 1800/3 2200/3 2300/3		13	25
SIZE60(4P)	MVE2400/15 1700/15		15	29
SIZE60(4 6 8P)	MVE1400/15 800/1 1100/1 1400/1 1500/1 1600/1 600/075 900/075		10	20
SIZE70(4P)	MVE2500/15 3000/15		18	35
SIZE70(6 8P)	MVE1620/1 2100/1 1300/075		12	24
SIZE75(2P)	MVE3200/3 4000/3 5000/3		18	36
SIZE75(4 6 8P)	MVE3800/15 4300/15 2600/1 3000/1 2100/075		26	52
SIZE80C(4P)	MVE3810/15		42	83
SIZE80C(6P)	MVE5210/1		50	100
SIZE80(4P)	MVE5500/15		50	100
SIZE80(6 8P)	MVE3800/1 4700/1 3100/075 3800/075		60	120



机座	电机型号	润滑脂牌号	填充	更换
SIZE85(2P)	MVE6500/3 9000/3	润滑脂牌号 MOBIL SHC POLYREX 102EM 或 SKF LGHP2 (具体牌号请 按电机表面 不锈钢标牌 为准)	30	60
SIZE85(4P)	MVE7200/15 9000/15		50	100
SIZE85(6 8P)	MVE5200/1 6500/1 8000/1 9000/1 4200/075 5300/075 6500/075		60	120
SIZE86 (2P)	MVE6500/3 9000/3		35	70
SIZE86 (4P)	MVE7200/15 9000/15		55	110
SIZE86 (6P)	MVE8000/1 9000/1 9800/1		68	135
SIZE86 (6P)	MVE5200/1 6500/1		68	135
SIZE86 (8P)	MVE4200/075 5300/075 6500/075		60	120
SIZE90(2P)	MVE12000/3		65	130
SIZE90(2P)	MVE15000/3		80	160
SIZE90(4P)	MVE10000/15		75	150
SIZE90(6P)	MVE10000/1 13000/1		85	170
	MVE13001/1		125	250
SIZE90(8P)	MVE10000/075		85	170
SIZE91(4P)	MVE10000/15		80	160
SIZE91(6P)	MVE10000/1 11400/1 13000/1		115	230
SIZE91(8P)	MVE10000/075		115	230
SIZE100(4P)	MVE11500/15 14500/15		105	210
SIZE105	MVE12000/1 12000/075		125	250
	MVE15000/1		125	250
	MVE14000/075		150	300
SIZE110	MVE17500/1 19500/1 17000/075		210	420
	MVE22000/1 22000/075		175	350
	MVE25000/1 25000/12 26000/075 26000/09	250	500	
SIZE120	MVE30000/1 30000/075 30000/090	275	550	
SIZE130	MVE40000/1	400	800	

注：标准电机一般使用 MOBIL SHC POLYREX 102EM，但客户如有特殊要求的请按照电机表面不干胶注油标示或不锈钢注油标示所标注的油脂牌号添加。如果电机存放超过 12 个月，建议按润滑脂牌号添加更换量的 5%-10%。

2.7、必须注意润滑脂质量，因润滑脂质量不良、变质或含有灰尘、粘砂、污垢等都会引起轴承温升过高，缩短电机寿命。

注：60Hz 电机型号的油脂添加量与该型号对应的 50Hz 电机油脂添加量相同。

小心！不要试图擅自修理振动电机或更换轴承。如在保证期内擅自修理或更换，保证条件将会失效。

3、MVE 系列电机外壳防护等级为 IP66，只要用户在接线或调整偏心块时不破坏密封装

置，不会有杂质进入。应及时清理振动电机表面尘埃，以利于振动电机表面散热。

4、用户安装运行振动电机的第一个月，应用力臂加长扳手紧固底脚安装螺栓不少于两次，以后的每个月应至少检查一次。

5、本振动电机的外壳颜色为国际通用安全警告色，建议用户不要用其它颜色覆盖。如客户需要，可作另行修改。

◆ 振动电机的检查

应至少每个季度对振动电机、电缆和连接装置进行一次检查。检查方法如下：

警告！在检查之前，应切断和锁定电振器电源，并给出警告标志。

- 1、应切断和锁定振动电机电源，并给出警告标志。
- 2、打开端罩检查端盖有无裂纹，端盖螺钉是否拧紧；检查偏心块螺钉是否拧紧（按表 V）。
- 3、检查电缆有无损坏，包括割痕和磨损。如有损坏应及时更换。

4、检查接地状况。一定要确保振动电机壳体接地电阻不超过 0.1 欧姆。确保接地端子上的螺钉拧紧力矩符合规定的要求。确保接线板上的所有联接螺母拧紧力矩符合规定的要求。但不可拧得过紧。

◆ 本说明书随技术发展的变更而变更，以最新提供的说明书为准。手机微信搜索欧力卧龙公众号或扫描铭牌上的二维码进入可下载最新版说明书。

◆ Dear user:

Thank you for choosing our company's production. Before you use the product, please read this instruction manual carefully and operate strictly according to it.

If there is anything unknown, please contact us in time, and avoid accident in using.

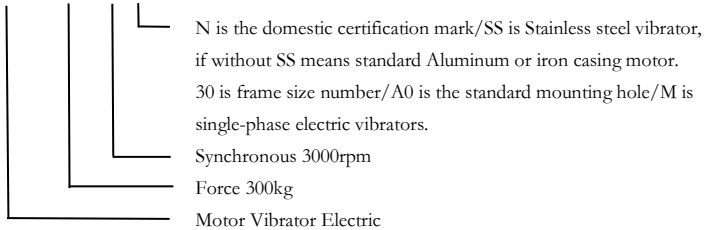
◆ Model Description

This foot vibrator manual includes all horizontally installed vibrator, i.e. three-phase/single-phase, AC/DC, etc. All types of foot vibrator are described as below:

*The AC vibrators are represented by the following symbols:

MVE force (kg) / Synchronous speed Special symbols

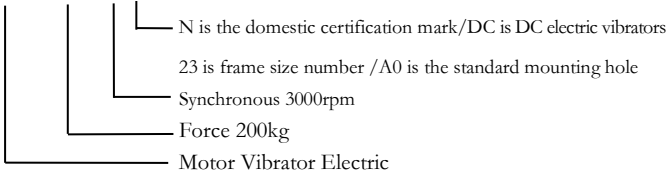
Example: MVE 300 / 3 N (-SS) - 30A0 (-M)



* The DC vibrators are represented by the following symbols:

MVE force (kg) / Synchronous speed Special symbols

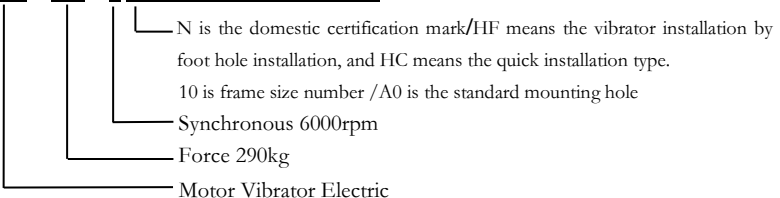
Example: MVE 200 / 3 N - DC- 23A0 - 12V



* The high frequency vibrators are represented by the following symbols:

MVE force (kg) / Synchronous speed Special symbols

Example: MVE 290 / 6 N - HF (or HC) - 10A0



◆ Electric vibrators use conditions

1、Applicable ambient temperature: $-20^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$ 。 Avoid storage at temperatures below -20°C .

2、Altitude: not more than 1000 meters.

3、Frequency: Except high frequency vibrator or DC vibrator, 50 Hz or 60Hz. The frequency of the high-frequency vibrator is 100Hz or 120Hz or 150Hz or 200Hz. (also be designed and manufactured according to the special requirements of users. Note that the nameplate marking data should match to the power supply) .

4、Rated voltage: except high Frequency vibrator, DC vibrator or single-phase vibrator, 220 / 380V when the motor power is $<4\text{kW}$, which is “ Δ ” / “Y” connection, connect 380V and "Y" when out of the factory; 380/660V when motor power is $\geq 4\text{kW}$, which is “ Δ ” / “Y” connection, connect 380V and " Δ " when out of the factory. The voltage of the single-phase vibrator is 220-230V or 100-115V, The voltage of the high frequency vibrator is 220/380V or 42V, The voltage of the DC vibrator is 24V or 12V or 36V (It can also be designed and manufactured according to the special requirements of users. Note that the power supply voltage should match to correspond the nameplate or wiring diagram.)

5、Insulation grade: F

6、Protection grade: IP66

7、Duty: S1 (continuous)

◆ Storage and Transportation

1、The electric vibrators SIZE10~60 produced by our company is packed in plastic bag and extra carton. SIZE70~130 is packed in plastic bag and wooden box, and the vibration motor SIZE70~130 is fixed on the wooden box with self-tapping screws. We recommended that users don't open the package in the storage process, ensure that the storage environment is dry and ventilated, and avoid the rapid change of environment temperature.

2、Vibrator don't be inverted during storage & transport process.

IMPORTANT NOTE: If the vibrator motor is damaged during transportation, please contact transporting company in time, and feedback us too, we could negotiate to our supplier.

◆ Electric vibrators installation

WARNING! Before installing the vibration motor, all energy sources of the supply equipment should be cut off and locked, and given the warning sign. All operations must be carried out by authorized professionals.

1、Before installation, check whether there is any injury or moisture in the transportation and whether the fasteners are loose or not. Especially if the vibration motor has been in the warehouse for

a long time (more than 24 months), we recommend removing the mass cover on one side and checking if the rotor can rotate freely. And make the insulation resistance test, the cold insulation resistance is not less than $100M\Omega$. If any abnormality is found, please contact our company.

2、 Check whether the nameplate data meets the requirements. If the user does not have special requirements, the position of the unbalance mass in the vibration motor produced by the company at the maximum centrifugal force position.

3、 The mounting surface of the vibration motor must be strong and flat (Figure 1). The planeness of the mounting surface should be less than 0.25mm (so that the internal stress generated in the frame of vibration motor can be minimized when the mounting bolt is tightened), the plate should not air holes and cracks; the mounting surface is not less than the bottom surface of the vibration motor; welding should be avoided in the mounting surface area, otherwise the flatness of the vibration motor mounting surface will be affected.

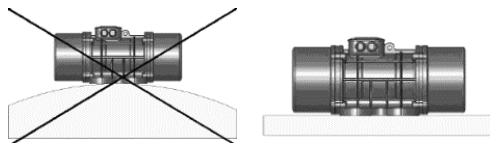


Figure 1 The mounting surface of the vibration motor

4、 Make sure that the mounting surface is free of paint and debris and that the vibration motor foot surface is clean.

BE CAREFUL! When the vibration motor has been installed and wired, it must not be welded on the mounting plate. Welding can cause damage of the vibration motor winding and bearing.

5、 The four foot bolts of the vibration motor should be selected according to the hole on the frame with a high-strength bolt of not less than 8.8 class, Use a wrench to securely fasten and adopt anti-loose measures. Do not looseness. SIZE10~50 should adopt a flat pad anti-loose structure. SIZE60~130 should generally be fastened with a flat pad and double nut to prevent looseness. Tighten the mounting bolts according to the Figure 2. Failure to tighten in the specified order may cause damage of the vibration motor. Thread glue should be applied to all bolts before installing the vibration motor on the mounting plate.

6、 The tightening torques of the various types of bolts are given in Table I. The user must tighten the foot bolts according to the corresponding torque during installation.

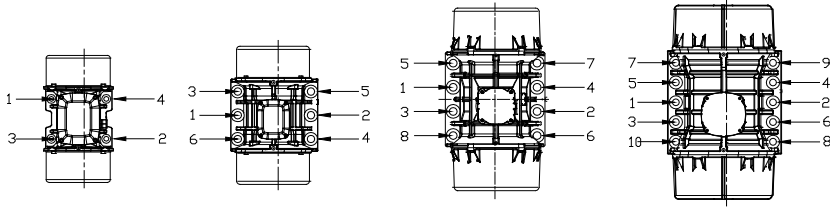


Figure 2 Fastening bolt tightening sequence

Table I Fastening bolts and tightening torque requirements

Metric system			
Bolt specification	Nm	Bolt specification	Nm
M6	9	M8	23
M10	45	M12	80
M16	185	M20	373
M22	550	M24	696
M27	873	M36	1864
M42	2850	/	/

7、MVE series electric vibrators have anti-drop mounting holes near the junction box. When the user installs the vibration motor above 0.2 m, it is recommended to use a chain hook as shown in Figure 3 to prevent the electric vibrators from falling when the four or six foot bolts are loose, cause the equipment damage and safety accidents.

8、After the electric vibrator started 10 to 20 minutes, check the bolt tightening torque. Tighten again if necessary.



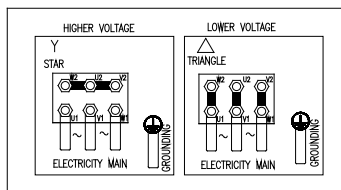
Figure3 Vibration motor anti-drop device

◆ Electric vibrators wiring

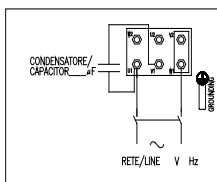
1、 You can find a wiring diagram same as Figure 4 or Figure 5 on the nameplate of our electric vibrators or on the back of the junction box cover.

2、 First, pass the power cord through the cable grand. After stripping the wire, thread the wire into the terminal blocks and press it with a cold compression pincers. Do not let copper wire exposure and extrude.

3、 In order to sealing between cable wire and cable grand, the cable wire should be use a four-core cable, one of them is a yellow-green two-color ground wire. The cable wire tighten scope of the cable gland and the nominal cross section of the cable conductor are shown in Table II.



three-phase



single phase

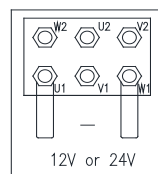


Figure 5 DC electric vibrators wiring diagram

Figure 4 AC electric vibrators wiring diagram

Table II Cable gland tighten scope and cable wire section surface

Cable connector model	Cable gland tighten scope	Cable wire section surface (mm ²)	Terminals	Note
M16x1.5	φ 4~8	4-0.5	0.5-5	SIZE10
M20x1.5	φ 6~12	4-0.5	0.5-5	SIZE20-30
M20x1.5	φ 6~12	4-1.5	1.5-5	SIZE40-50
M25x1.5	φ 9~16	4-2.5	2.5-5	SIZE60-70
M32x1.5	φ 13~20	4-4	4-6	SIZE75-80
M32*1.5	φ 16~22	4-6	6-6	SIZE85-90
		4-6	6-8	SIZE100-105
		4-6	6-10	SIZE110
M32*1.5	φ 19~26.5	3-10+1-6(ground wire)	10-10	SIZE120-130

BE CAREFUL! Before connecting the power line to the three-phase AC vibrators, make sure that the Dielectric Strength of power line must be equal or greater than the vibration motor voltage that you are operating. Its maximum rated temperature is 105 °C, the minimum wire diameter is shown in Table II. If the diameter of the power line is not properly selected, the cable grand can not be clamped into the right position and the vibration motor will be damaged due to moisture



or accumulation of material in the junction box. If the power line is damaged, it will cause a short circuit in the power supply or a short circuit to the ground, and cause vibration motor damage.

4、 Please strictly follow the diagram wiring, pay attention to the yellow-green two-color line in the power line should be grounded reliably, in order to prevent the wiring error leading to personal safety and motor burn out, and the grounding wire should always be longer than the other three wires to ensure the occurrence happen of the lead-out line broken and this line finally broken.

5、 The capacitor of the single-phase vibration motor should be the same as that of the capacitor on the nameplate. The capacitor should be connected to the part of the motor that is not vibration.

6、 After the terminal blocks is installed into the terminal post as shown in Figure 6, press the special anti-loose washer, and then fully tighten with the terminal nut(Nut tightening torque requirements are shown in Table III) . Pay attention to the mutual position of the terminals and ensure the electric clearance $\geq 8\text{mm}$.

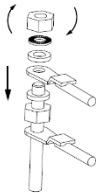


Figure 6 Cable wiring

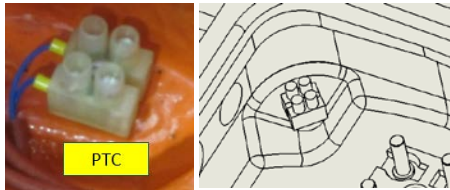



Figure 6.1 PTC Thermistor

7、 Tighten the cable grand according to the length of the required cable and then tighten the nut. Note that the built-in seal ring of the cable grand should be tightly placed over the cable rubber protective layer.

Table III Terminal nut specification and tightening torque requirements

	Nm	ft*lb
M5	4	2.95
M6	5	3.69
M8	6	4.43
M10	8	5.90

IMPORTANT NOTE: When the vibration motor is wired, the power line should be kept at a loose state. In this way, during the vibration, the power line is not excessively tensioned, cause the stress inside the wiring. When used in a humid environment, keep the power line in a sufficiently loose state to prevent condensate from flowing along the power line to the vibration motor.

8、When using the electric vibrators, it should be equipped with corresponding overload protection or short circuit protection device according to the current. And avoid one protection device simultaneously controlling two or more vibration motors.

9、Except for vibrators with fully potted junction boxes, the PTC thermistor is installed in the standard SIZE60-130 vibrator junction box as shown in Figure 6.1. The user can connect the temperature control module as needed.

◆ Check the rotation of the shaft

1、Open the vibration motor cover, pay attention to protect the "O-ring" sealing system.

BE CAREFUL! Try to not to remove the unbalance mass, If necessary, do not operate the vibration motor after the unbalance mass is removed. Running the vibration motor after the unbalance mass is removed may cause damage to the bearing.

WARNING! When checking the rotation of the shaft under the condition that the cover is removed, do not touch the rotating parts by hand, otherwise it may cause finger injury.

2、Start the electric vibrators for 1 second and then stop.

3、Pay attention to the rotation direction of the vibration motor. If the rotation direction of the vibration motor needs to be adjusted, first cut off and lock the power supply / give a warning sign, then change the direction of vibrator rotation through changing the power cable connection order refer to figure 7.

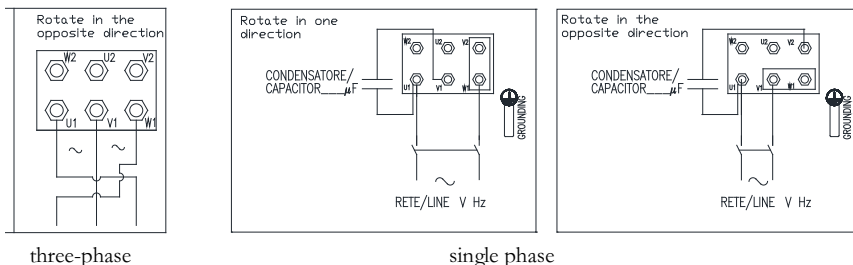


Figure7

4、Reinstall the mass cover, be careful not to discard or squeeze out the “O-ring” , which will greatly reduce the motor sealing property.

◆ The Adjustment Of Electric Vibrator Unbalance Mass

NOTE: The axial end in all MVE series of the electric vibrator have a set of mass. The mass is set to 100% when out of factory. The percentage increment on the mass adjust plate represents the percentage of the total centrifugal force (50Hz or 60Hz) given in kilograms on the nameplate. For example, if the nameplate gives 700kg of centrifugal force, set at 50%, it will generate 350kg of centrifugal force.

1. If you need to adjust the centrifugal force of the electric vibrator, you can adjust the vibration force of the electric vibrator by adjusting the Angle of the masses.

WARNING! Before adjusting the mass, power off the electric vibrator and lock/give warning signs.

2. Open the mass cover of the vibration motor, and pay attention to protect the “O-ring” sealing ring.

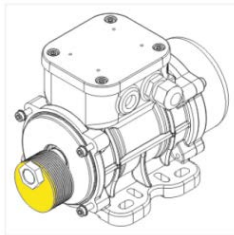
3. Standard vibrator Adjustment of centrifugal force of vibration motor for a slice mass: loosen the fastening nut of slice mass. After the change the centrifugal force are shown in Table IV.

NOTE: when the centrifugal force is adjusted, the number of slice mass on both sides of the vibration motor should be ensured to be same, otherwise the service life and vibration effect of the vibration motor will be greatly affected, and the vibration motor will be damaged!

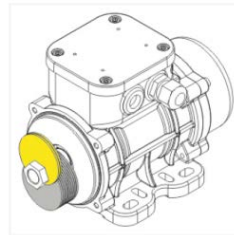
Table IV slice mass adjustment

Total number of chip masses	5+5	7+7	8+8	9+9	10+10	12+12
The reduced centrifugal force caused by each side turning over a piece (rated centrifugal force %)	40	28.6	25	22.2	20	16.7

3.1 The high frequency vibrators mass adjustment


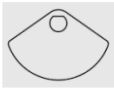


MASSSES AT 100%



ADJUSTED MASSES

For example: MVE290/6N-HF-10A0

MVE 290/6N-HF-10A0				MVE 1530/6N-HF-38E0 MVE 1530/6N-HC-38A0			
200HZ				200HZ			
mass	Φ48*2 18PC			mass	R63*2 12PC		
C.F	method	kg	Lb	C.F	method	kg	Lb
100%	9PC each side	297	655	100%	6PC each side	1373	3027
75%	Turn up 1 PC on each side	222	491	76%	Turn up 1 PC on each side or 5PC each side	1043	2300
55.5%	Turn up 2 PC on each side	164	363	58%	Turn up 2 PC on each side or 4PC each side	796	1755
33.3%	Turn up 3 PC on each side	98	218	50%	Turn up 3 PC on each side	686	1513

ZEN

EN

MVE 2000/6N-HC-50A0					MVE 2000/9N-HF-53A0 MVE 2000/9N-HC-50A0				
200HZ					150HZ				
mass	R73*3 8PC				mass	R73*1.5 8PC			
C.F	method		kg	Lb	C.F	method		kg	Lb
100%	4PC each side		1907	4204	100%	4PC each side		2156	4753
75%	Remove 1PC on each side		1430	3153	75%	Remove 1PC on each side		1617	3564
50%	Turn up 1PC on each side		953	2102	50%	Turn up 1PC on each side		1078	2376

MVE 1300/6N-HF-50A0 MVE 1300/6N-HF-53A0 MVE 1300/6N-HC-50A0					MVE 2400/6N-HF-53A0				
200HZ					200HZ				
mass	R73*3 10PC				mass	R73*3 10PC			
C.F	method		kg	Lb	C.F	method		kg	Lb
100%	Turn up 1 PC on each side		1430	3153	100%	5PC each side		2383	5254
66.7%	Remove 1PC and turn up 1 PC on each side		953	2101	60%	Turn up 1PC on each side		1430	3153
33.3%	Turn up 2 PC on each side		477	1052	20%	Turn up 2PC on each side		477	1051

MVE 1300/6N-HF-50A0 MVE 1300/6N-HF-53A0 MVE 1300/6N-HC-50A0						MVE 2000/6N-HF-53A0					
100HZ						100HZ					
mass	R73*3 10PC				mass	R73*3 8PC					
Hz	rpm	C.F	method	kg	Lb	Hz	rpm	C.F	method	kg	Lb
100	6000	100%	Turn up 1PC on each side	1430	3153	100	6000	100%	4PC each side	1907	4203
90	5400	81%	Turn up 1PC on each side	1158	2554	90	5400	81%	add 1PC on each side	1930	4256
80	4800	64%	Turn up 1PC on each side	915	2018	80	4800	64%	add 1PC on each side	1525	3363
70	4200	82%	5PC each side	1168	2575	70	4200	82%	add 1PC on each side	1168	2575
60	3600	60%	5PC each side	858	1892	60	3600	60%	add 1PC on each side	858	1892
50	3000	42%	5PC each side	596	1314	50	3000	42%	add 1PC on each side	596	1314
40	2400	27%	5PC each side	381	841	40	2400	27%	add 1PC on each side	381	841
30	1800	15%	5PC each side	215	473	30	1800	15%	add 1PC on each side	214	473
20	1200	7%	5PC each side	95	210	20	1200	7%	add 1PC on each side	95	210

4. Adjustment of centrifugal force of Circular mass of Standard Vibration Motor (see figure 8).

4.1 Loosen the clamping screw (sequence 2) of the adjust mass (sequence 3), and the adjust mass can rotate freely on the rotating shaft. There is no need to remove the circlip at both ends of the shaft head and loosen the clamping screw of the fixed (active) mass (sequence 5) near the flange.

4.2 Adjust the mass according to the required centrifugal force. When the center line of the mass slot (sequence 4) matches up with the circular mass adjust plate (sequence 1) (SIZE20~50 circular mass adjust plate are double frequencies, i.e. 50/60hz; The SIZE60 circular mass adjust plate is a single

frequency, 50Hz, or 60Hz) 50Hz, or 60Hz "100%" calibration line, indicating the maximum centrifugal force at 50Hz or 60Hz. And matching up with the "0%" calibration line the centrifugal force is zero.

4.3 Set the original maximum centrifugal force as F_c . When the center line of the mass slot matches up with the "80%" scale line of the circular mass indicator 50Hz, the adjusted centrifugal force is $F_c \times 80\%$ of 50Hz, as shown in figure 8.

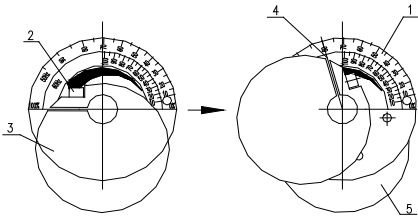


Figure 8 vibration force adjustment of circular mass

4.4 After adjustment of centrifugal force, the clamping screws of masses at both ends should be fully tightened. The minimum tightening torque is shown in Table V (Page 11), the maximum tightening torque is 1.05~1.1 times the minimum tightening torque.

5. Adjustment of centrifugal force of electric vibrator with fan-shaped mass (see figure 9);

5.1 Loosen the clamping screw (sequence 2) of the adjust mass (sequence 3). The mass can rotate freely on the rotating shaft. Do not need to remove the circlip at both ends of the shaft head and to loosen the clamping screw (sequence 5) which is close to the fixed (driving) mass (sequence 4) near the flange.

5.2 Adjust the mass according to the required centrifugal force. When the vertical edge of the mass matches up with 50Hz or 60Hz "100%" scale line of the adjust plate of the fan-shaped mass (sequence 1) (2, 4 and 6P fan-shaped mass adjust plate of SIZE20~50 is double frequency, i.e. 50/60hz. 8 poles of SIZE40 and 50, fan-shaped mass adjust plate of SIZE60~110 is single frequency, i.e., 50Hz or 60Hz), which indicates that the maximum centrifugal force is at 50Hz or 60Hz. And matching up with the "0%" scale the centrifugal force is zero.

5.3 Set the original maximum centrifugal force as F_c . When the vertical edge of the mass matches up with the "80%" calibration line of the centrifugal force adjust plate 50Hz, the adjusted centrifugal force is 50Hz's $F_c \times 80\%$, as shown in figure 9.

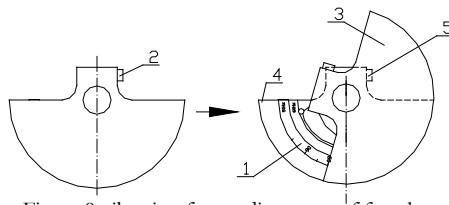


Figure 9 vibration force adjustment of fan-shaped mass

5.4 After adjustment of centrifugal force, the clamping screws of masses at both ends should be fully tightened. The tightening torque is generally determined according to the clamping screw thread, as shown in Table V.

Table V Minimum torque of mass screw/nut

Screw/ Nut type	M6	M8	M10	M12	M14	M16	M20	M15*1 NUT	M12 NUT	M24 NUT
Tighten torque Nm	11	22	52	95	160	175	350	50	60	80

6. Install the mass cover and tighten the mass cover mounting screw.

NOTE: after the masses are tightened. In order to avoid the rotor rotation is not flexible and the motor is burned, it is recommended to use copper rod (that is softer metal bar) or wooden hammer to gently knock the shaft end to make it rotate flexibly.

Note: when adjusting the centrifugal force, the adjustment Angle of masses on both sides of the electric vibrator should be same, that is the mass on both sides should be adjusted at the same setting value position (mirror) as shown in figure 10, otherwise the centrifugal force will be uneven, which will greatly affect the service life and vibration effect of the electric vibrator, and lead to damage of the electric vibrator!

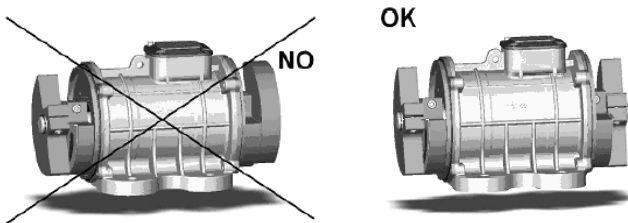


Figure 10 the position of masses weight setting positions on both sides should be mirrored

◆ Electric vibrator first start/check line current

1. Connect the power switch and run the motor for 10 to 20 minutes.
2. If the electric vibrator has abnormal sound or excessive noise, confirm that the mounting bolts have been tightened and the welding of the mounting parts is not damaged.

WARNING! The electric vibrator installed on the structure will make a lot of noise during operation. During operation, check the noise level of vibration motor.

3. Check the dB level of motor vibration noise during operation.

BE CAREFUL! The working current of the electric vibrator shall not exceed the rated value indicated on the nameplate. If the vibration motor works continuously, the line current exceeds the rated value on the nameplate, the vibration motor may be damaged.

4. Check the current of each wire after several hours of operation. If the reading value exceeds the rating given by the nameplate, the centrifugal force setting value should be reduced, and further tighten the mounting parts or move the electric vibrator to a more rigid position. After adjustment, check the line current again to ensure that the line current does not exceed the rating given on the nameplate.

BE CAREFUL! The electric vibrator shall not be allowed to work over the frequency range specified on the nameplate, otherwise it may cause damage to the electric vibrator. Throughout the frequency range, make sure the line current does not exceed the specified rating on the nameplate.

5. After the first 8 hours' use, the mounting bolt tightening torque shall be regularly checked and tightened if necessary.

◆ Care and maintenance

1. All low-power electric vibrators produced by our company are specially designed with special Deep groove ball bearings of international brand vibration source, which have been injected with special lubricating grease and are working normally without maintenance.

2. The high-power vibration motor (MVE1300/3、MVE1100/15、SIZE60~SIZE130) adopts the special vibration source single row cylindrical roller bearing which can with stand the radial heavy load. The care and maintenance precautions are as follows:

2.1. In order to reduce the internal friction and wear, to prevent burns, prior to the motor assembly inside the bearing space filling the right amount special high temperature grease according to the corresponding in Table VI.

BE CAREFUL! Electric vibrator can only use the corresponding special high temperature grease in "Table VI". If other grease is used, the electric vibrator may be damaged and the guarantee conditions may be invalidated. The vibrating motor must be lubricated according to the specified amount of grease. If too much is used, the bearing may overheat and cause premature bearing failure.

2.2. The vibration motor shall pay attention to bearing lubrication and monitor bearing temperature every half month (preferably use resistance thermometer). If the bearing temperature rises above 10 degrees, which shows that bearing lubrication may be insufficient, need to use oil gun to inject corresponding special high temperature grease in Table VI from the oil hole.

2.3. In order to ensure the normal work of the bearing, the bearing must adopt corresponding special high temperature grease in Table VI. After every 2000 hours of operation, motor must be populated the corresponding special high temperature grease according to Table VI. Before adding fresh grease, apply a clean cloth to clean the electric vibrator shell around the nozzle, insert the nozzle into the nozzle and add the grease. Under normal conditions, the bearing will have a natural temperature rise



after just lubrication or relubrication and continue for one or two days.

BE CAREFUL! When the equipment is running continuously at 3,600rpm/min revolutions or working for a long time, the lubrication cycle should be shortened and the amount of lubrication given in step 2.4 should be followed. Otherwise, it will be possible to make the bearing work without lubrication and cause equipment damage.

2.4. if the electric vibrator shell temperature over 90 °C (194° F), it should use the specified value which is not less than 90 °C (194° F) as the base, each more than 10 °C (50° F) temperature, lubrication time shorten half, grease consumption is reduced by half. For example, MVE1400/15, the electric vibrator shell temperature reaches 96 °C (204.8° F), bearing every work 1000 hours, should add 3 grams each bearing grease (maximum allowable bearing temperature is 120 °C (248° F)). When the motor shell temperature exceeds 100 °C (212° F), consult the OLI-WOLONG company.

2.5. In order to prevent dust from entering the oil injection hole and damaging the bearing, the oil injection hole is usually sealed by oil cup.

2.6. The weight (g) of the filled or replaced grease in each bearing should follow the Table VI:

Table VI Brand of grease and the filled or replaced quantity

Engine base	Motor model	Brand of grease	Fill	Replace
SIZE50A0、53A0	MVE1300/6 2000/6 2400/6 2000/9	KLUBER-NB52	Free maintenance	14
SIZE50(2P)	MVE1300/3	MOBIL SHC POLYREX 102EM or SKF LGHP2 (For specific grades, please refer to the stainless steel plate on the surface of the motor)	Free maintenance	10
SIZE50(4P)	MVE1100/15		Free maintenance	11
SIZE60(2P)	MVE1600/3 1800/3 2200/3 2300/3		13	25
SIZE60(4P)	MVE2400/15 1700/15		15	29
SIZE60(4 6 8P)	MVE1400/15 800/1 1100/1 1400/1 1500/1 1600/1 600/075 900/075		10	20
SIZE70(4P)	MVE2500/15 3000/15		18	35
SIZE70(6 8P)	MVE1620/1 2100/1 1300/075		12	24
SIZE75(2P)	MVE3200/3 4000/3 5000/3		18	36
SIZE75(4 6 8P)	MVE3800/15 4300/15 2600/1 3000/1 2100/075		26	52
SIZE80C(4P)	MVE3810/15		42	83
SIZE80C(6P)	MVE5210/1		50	100
SIZE80(4P)	MVE5500/15		50	100
SIZE80(6 8P)	MVE3800/1 4700/1 3100/075 3800/075		60	120
SIZE85(2P)	MVE6500/3 9000/3		30	60
SIZE85(4P)	MVE7200/15 9000/15	50	100	



Engine base	Motor model	Brand of grease	Fill	Replace
SIZE85(6 8P)	MVE5200/1 6500/1 8000/1 9000/1 4200/075 5300/075 6500/075	MOBIL SHC POLYREX 102EM or SKF LGHP2 (For specific grades, please refer to the stainless steel plate on the surface of the motor)	60	120
SIZE86 (2P)	MVE6500/3 9000/3		35	70
SIZE86 (4P)	MVE7200/15 9000/15		55	110
SIZE86 (6P)	MVE8000/1 9000/1 9800/1		68	135
SIZE86 (6P)	MVE5200/1 6500/1		68	135
SIZE86 (8P)	MVE4200/075 5300/075 6500/075		60	120
SIZE90(2P)	MVE12000/3		65	130
SIZE90(2P)	MVE15000/3		80	160
SIZE90(4P)	MVE10000/15		75	150
SIZE90(6P)	MVE10000/1 13000/1		85	170
	MVE13001/1		125	250
SIZE90(8P)	MVE10000/075		85	170
SIZE91(4P)	MVE10000/15		80	160
SIZE91(6P)	MVE10000/1 11400/1 13000/1		115	230
SIZE91(8P)	MVE10000/075		115	230
SIZE100(4P)	MVE11500/15 14500/15		105	210
SIZE100(6 8P)	MVE12000/1 12000/075		125	250
SIZE105	MVE15000/1		125	250
	MVE14000/075		150	300
	MVE17500/1 19500/1 17000/075		210	420
SIZE110	MVE22000/1 22000/075	175	350	
	MVE25000/1 25000/12 26000/075 26000/09	250	500	
SIZE120	MVE30000/1 30000/075 30000/090	275	550	
SIZE130	MVE40000/1	400	800	

Note: standard motor usually use MOBIL SHC POLYREX 102EM bearing grease, but if customer have specific request please follow the grease warning label on the motor surface. If vibrator store in warehouse more than 12 months, suggest replace the lubrication grease or fill 5%-10% quantity before running.

2.7. Must pay attention to the quality of the grease. The poor quality of the grease, deterioration or containing dust, sand and dirt will cause the bearing temperature rise too high and shorten the service life of the motor.

Note: The same quantity of lubrication either 60Hz or 50Hz frequency.

BE CAREFUL! Do not attempt to repair vibration motors or replace bearings without permission. If the motor is repaired or replaced during the warranty period, the warranty will be invalid.

3. The protection grade of the MVE electric vibrator shell is IP66, so long as the user does not break the sealing device when wiring or adjusting the mass, no impurities will enter. Dust on the surface of the electric vibrator should be cleaned in time to facilitate heat dissipation on the surface of the vibrating motor.

4. In the first month after the user installs the electric vibrator, the installation bolt of the bottom foot shall be tightened with the extension wrench of the arm no less than twice, and shall be checked at least once every month in the future.

5. The shell color of this electric vibrator is the international general safety warning color. It is recommended that users do not cover it with other colors. If the customer needs, it can be modified separately.

◆ Inspection of Electric vibrator

Vibration motors, cables and connections device shall be inspected at least once a quarter. The inspection method is as follows:

WARNING! Before checking, the power supply of the electric vibrator should be cut off and locked, and warning signs should be given.

1. The power supply of the vibrating motor should be cut off and locked, and warning signs should be given.

2. Check if the flange is cracked and the flange screw is tightened.

3. Check if the cable is damaged, including cutting marks and wear. If there is any damage, it should be replaced in time.

4. Check the ground connection. Make sure that the vibration motor housing grounding resistance does not exceed 0.1 ohm. Ensure that the screw tightening torque on the terminal blocks meets the specified requirements. Ensure that all coupling nuts on the terminal plate meet the required tightening torque. But not too tightly.

◆ The warranty specification is subject to change with the development of the technology. You can search OLI Wolong official account by WeChat on Mobile phone or scan the QR code on the nameplate to download the latest manual, the latest specifications shall prevail.