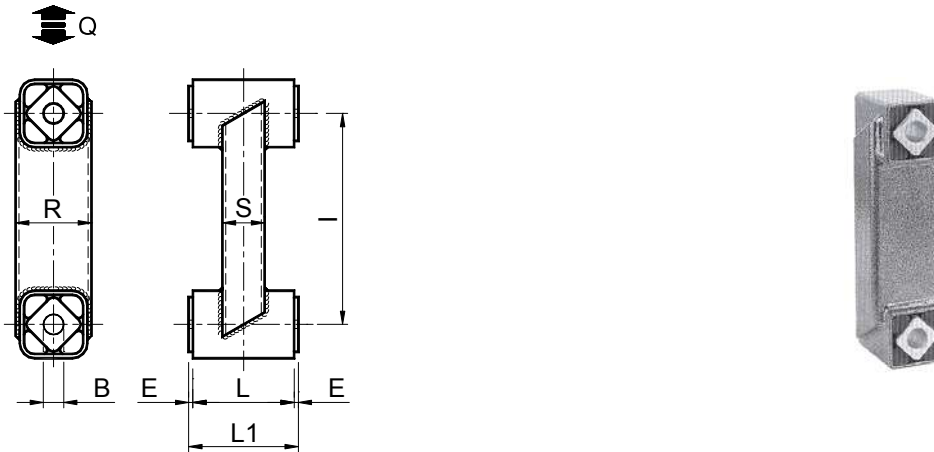


VIB 弹性组件 型号: TP-F / Elastic Components VIB Type: TP-F



型号 Type	编号 N°	Q	n	D _m	E _d	B	E	I	L	L ₁	R	S	重量 Weight in kg
TP-F 20	RE020662	96	1150	17	4.8	10 ^{+0.40 +0.20}	2.5	100	40	45	35	20	0.58
TP-F 30	RE020664	197	1150	21	10.0	13 ^{+0.00 +0.20}	2.5	120	50	55	40	20	0.76
TP-F 40	RE020666	385	750	28	11.2	16 ^{+0.50 +0.30}	2.5	160	60	65	60	40	1.75
TP-F 50	RE020668	765	750	35	18.3	20 ^{+0.50 +0.20}	5	200	80	90	70	50	3.72
TP-F 60	RE020670	1510	750	35	31.8	24 ^{+0.50 +0.20}	5	200	100	110	80	40	5.57
TP-F 70	RE020672	2370	560	44	35.2	30 ^{+0.50 +0.20}	5	250	120	130	90	50	6.50

Q: 每个悬架的最大负载 以 N 表示 / Max loading in N per rocker suspension

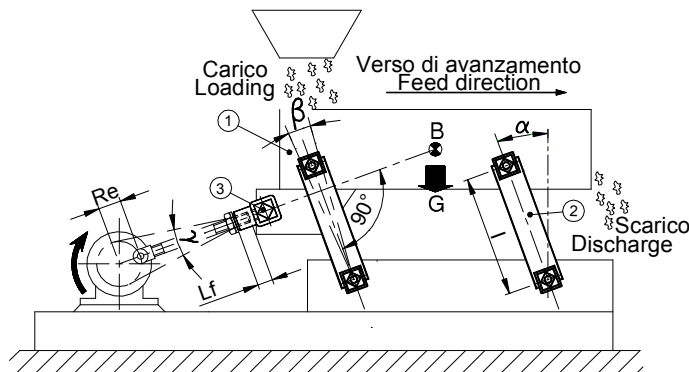
偏心轮最高旋转速度 以 min^{-1} 表示 最大角度为 $\pm 10^\circ$ 从位置 0 波动 $\pm 5^\circ$

n: Max crank rotation velocity in min^{-1} at the max angle $\pm 10^\circ$ from 0 $\pm 5^\circ$

D_m: 最大振幅 以 mm 表示 / Max amplitude given in mm

动力弹性 以 Nm° 表示 角度为 $\pm 5^\circ$, 频率范围从 300 至 600 min^{-1}

E_d: Dynamic spring value in Nm° at per $\pm 5^\circ$, in frequency range 300-600 min^{-1}



图例说明 / Key:

1: 滑槽 / Sliding chute

2: VIB TP-F 型悬架 / BT-F suspension

3: VIB TB 型连杆头 / TB Drive head

B: 重心 / Center of gravity

G: 总重量 / Total weight

I: 轴距 / Distance between centers

L_f: 螺纹段最低长度 (1.5-2 S) / Min Screwed-in length (1.5-2 S)

R_c: 曲柄半径 / Crank radius

S: VIBTB 型螺纹连杆头直径 / Threaded diameter inside type TB

α: 安装角度从 20° 至 30° / Rocker angle from 20° to 30°

β: 工作角度 / Working angle

γ: 曲柄振动角度 / Oscillating crank angle

材料

外部结构为钢制，内部方管为铝制拉丝。

处理

外部结构为烤炉涂漆，内部方管由 RAL 涂漆覆盖。

使用

TP-F 振动组件主要应用于使用连杆曲柄制动的输送机
和振动筛中具不可变轴距的悬架。

MATERIALS


The external structure is made of steel while the inner squares are made of light alloy profile.


TREATMENTS

The external structure is oven-painted while the inner squares are covered with a RAL varnish.

DUTY

TP-F Oscillating component is particularly used to realize suspension with not adjustable axle base or screen rockers actuated by a connecting rod/crank device.

 **计算实例:** 振动输送机所需的悬架数目的计算，使用由 TP-S 50 或 TP-F 50 构成的组件

 **CALCULATION EXAMPLE:** Determination of the mounting number for an oscillating conveyor, using TP-S 50 or TP-F 50 type.

初始数据 / Given data:

n:	旋转速度: Rotation velocity:	280 min ⁻¹	R_e:	曲柄半径: Crank radius:	18 mm
G_g:	槽重: Chute weight:	5580 N	E_d:	动力弹性: Dynamic spring value:	18 Nmm/°
G_m:	所输送物料重量: Material weight:	1000 N			

未知数据 / Unknow data:

X: 所使用悬架的数目 / Number of mountings

计算步骤 / Calculation steps:

总重量 G 为槽重 (G_g) 与所输送物料重量的 (G_m) 的 22% 的总和

The total weight G is given by the sum of weight of the chute (G_g) plus 22% of the weight of the material to be conveyed (G_m)

$$\text{G: 总重量} = G_g + \frac{G_m \cdot 22}{100} = 5580 + \frac{1000 \cdot 22}{100} = 5800 \text{ N}$$

Total weight

$$\text{E}_t: \text{总弹性} = \frac{G}{9810} \cdot \left(\frac{2 \cdot \pi \cdot n}{60} \right)^2 = \frac{5800}{9810} \cdot \left(\frac{\pi \cdot 280}{30} \right)^2 = 507.8 \text{ N/mm}$$

Total spring value

1) 在无共振条件下 / Without resonance condition:

组件数目等于振动块总重除以一个悬架所允许的负载，即：

$$\text{X: } \textit{The number of the elements X is obtained by dividing the total weight of the oscillating mass by the load permitted by one mounting, so:} = \frac{G}{Q} = \frac{5800}{765} = 7.58 \rightarrow 8$$

结论： 应使用至少 8 个 TP-S 50 或 TP-F 50 组件。

Conclusion: It must be used 8 pcs TP-S 50 or TP-F 50 mountings at least.

2) 在共振条件下 / With resonance condition:

悬架的总弹性 E_t 应接近动力弹性以上 10% ，即：

$$\text{X: } \textit{The total spring value E}_t \textit{ of the mounting must be at least 10% greater than the dynamic spring value, so:} = \frac{E_t}{0.9 \cdot E_d} = \frac{507.8}{0.9 \cdot 18.3} = 30.83 \rightarrow 32$$

结论： 应使用 32 个 TP-S 50 或 TP-F 50 悬架组件。

Conclusion: It must be used 32 pcs TP-S 50 or TP-F 50 mountings at least.