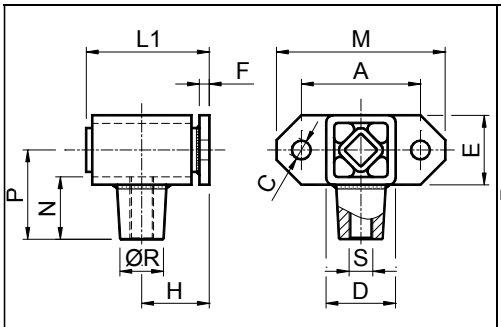
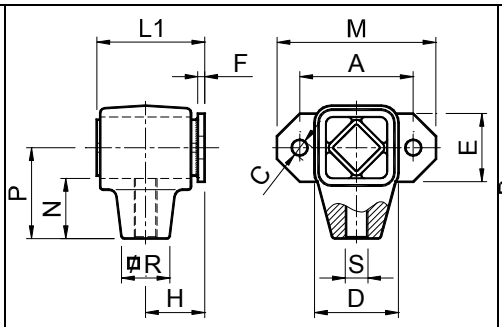
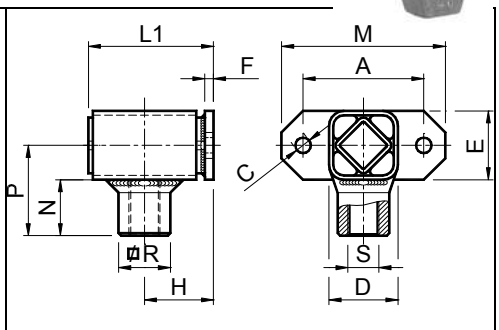
VIB 弹性组件 型号: **BT-F** / *Elastic Components* ***VIB*** *Type:* ***BT-F***



尺寸 20 和 30 / *SIZES 20 and 30*



尺寸 40 和 50 / *SIZES 40 and 50*



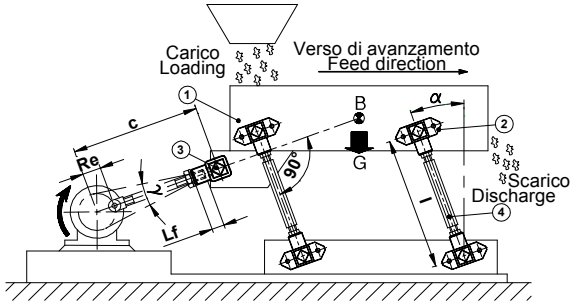
尺寸 60, 70 和 80 / *SIZES 60,70 and 80*

型号 *Type*	编号 N°	Q	n	Md	A	C	D	E	F	H	L1	M	N	P	R	S	重量 *Weight* in kg
BT-F 20	**RE020584**	96	1150	0,42	50	7	30	25	4	28	50	70	29	40	20	M10	0,28
BT-F 20 S	**RE020586**	96	1150	0,42	50	7	30	25	4	28	50	70	29	40	20	M10S	0,28
BT-F 30	**RE020588**	197	1150	1,26	60	9,5	35	35	5	34	62	85	31,5	45	22	M12	0,44
BT-F 30 S	**RE020590**	197	1150	1,26	60	9,5	35	35	5	34	62	85	31,5	45	22	M12S	0,44
BT-F 40	**RE020592**	385	750	2,5	80	11,5	54	45	5	40	73	110	40,5	60	28	M16	0,85
BT-F 40 S	**RE020594**	385	750	2,5	80	11,5	54	45	5	40	73	110	40,5	60	28	M16S	0,85
BT-F 50	**RE020596**	765	750	6,4	100	14	74	60	6	52	95	140	53	80	42	M20	2,00
BT-F 50 S	**RE020598**	765	750	6,4	100	14	74	60	6	52	95	140	53	80	42	M20S	2,00
BT-F 60	**RE020600**	1510	750	11,1	130	18	76	70	8	66	120	180	62	100	45	M24	3,20
BT-F 60 S	**RE020602**	1510	750	11,1	130	18	76	70	8	66	120	180	62	100	45	M24S	3,20
BT-F 70	**RE020604**	2370	560	19,2	140	18	80	80	10	80	145	190	65	105	60	M36	8,50
BT-F 70 S	**RE020606**	2370	560	19,2	140	18	80	80	10	80	145	190	65	105	60	M36S	8,50
BT-F 80	**RE020608**	4700	370	27,4	180	18	110	120	15	128	233	230	75	130	80	M42	20,00
BT-F 80 S	**RE020610**	4700	370	27,4	180	18	110	120	15	128	233	230	75	130	80	M42S	20,00

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

n: 偏心轮最高旋转速度 以 min^{-1} 表示 最大角度为∢10° 从位置 0 波动∢ ±5°
Max crank rotation velocity in min^{-1} at the max angle ∢10° from 0 ∢ ±5°

M_d: 动态扭矩 以 Nm/°表示 角度为∢ ±5°, 频率范围从 300 至 600 min^{-1} / *Dynamic torque in Nm/° at per ∢ ±5°, in frequency range 300-600 min^{-1}*



图例说明 / *Key*:

1: 滑槽 / *Sliding chute*

2: VIB BT-F 型悬架/ *BT-F suspension*

3: VIB TB 型连杆头 / *TB Drive head*

4: 连接单位 / *Connecting rod*

B: 重心 / *Center of gravity*

G: 总重量/ *Total weight*

l: 轴距 / *Distance between centers*

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

R_e: 曲柄半径 / *Crank radius*

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

β: 工作角度 / *Working angle*

材料

尺寸为 20、30、60、70 和 80，外壳为不锈钢制； 尺寸为 40 和 50，外壳为铝制。内部方管和法兰均为钢制。

处理

外壳、内部方管和法兰均为烤炉涂漆。

使用

BT-F 振动组件主要应用于输送机和使用连杆 / 曲柄驱动的振动槽中悬架装置的设计。

MATERIALS

The external body is made of steel in the sizes 20, 30, 60, 70 and 80, light metal die cast in the sizes 40 and 50. The inner square and the fixation flange are made of steel

TREATMENTS

The external body, the inner square and the fixation flange are oven-painted.

DUTY

BT-F Oscillating component is generally used to realize rocker suspension in conveyors and oscillating screens actuacted by connecting rod/crank device.

计算实例: 使用由两个 BT-F 50 构成组的振动输送机所需的悬架装置数目的计算。

CALCULATION EXAMPLE: *Determination of the mounting number for an oscillating conveyor using BT-F 50 type.*

初始数据 / *Given data:*

M_d:	动态扭矩: *Dynamic torque*:	6.4 Nm/° (da catalogo/ *catalogue*)	**G_m:**	所输送物料重量: *Material weight*:	1000 N
n:	旋转速度: *Rotation velocity*:	150 min^{-1}	**I:**	悬架轴距长度: *Distance between centers*:	250 mm
G_g:	槽重: *Chute weight*:	5580 N	**R_e:**	曲柄半径: *Crank radius*:	18 mm

未知数据/ *Unknow values:*

X: 应用悬架数目 / *Number of mountings*

计算步骤 / *Calculation steps:*

E_d: 动力弹性 / *Dynamic spring value* = $$\frac{M_d \cdot 360 \cdot 1000}{I^2 \cdot \pi} = \frac{6.4 \cdot 360 \cdot 1000}{250^2 \cdot \pi} = 11.74 \text{ N/mm}$$

总重量 G 为槽重 (**G_g**) 与所输送物料重量 (**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**)*

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

E_t: 总弹性: *Total spring value:* $$= \frac{G}{9810} \cdot \left(\frac{2 \cdot \pi \cdot n}{60}\right)^2 = \frac{5800}{9810} \cdot \left(\frac{\pi \cdot 150}{30}\right)^2 = 145.7 \text{ N/mm}$$

1) 非共振条件 / *Without resonance condition:*

X: 组件数目等于振动重体总重除以一个悬架所能允许的负载，即：

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 个悬架，每件由两个 **BT-F 50** 组件组成 ➔ 16 个 **BT-F 50**.

Conclusion: *It must be used 8 mountings at least, each comprising 2 pcs **BT-F 50** elements ➔ 16 pcs **BT-F 50***

2) 共振条件下 / *With resonance condition*:

X: 悬架的总弹性 E_t 应比动力弹性大约高 10% ，即:

The total spring value E_t of the mounting must be at least 10% greater that than the dynamic spring value, so: $$= \frac{E_t}{0.9 \cdot E_d} = \frac{145.7}{0.9 \cdot 11.74} = 13.78 \rightarrow 14$$

结论: 应使用 14 个悬架，每件由两个 **BT-F 50 组成** ➔ 28 个 **BT-F 50**.

Conclusion: *It must be used 14 mountings, each comprising 2 pcs **BT-F 50** elements ➔ 28 pcs **BT-F 50**.*

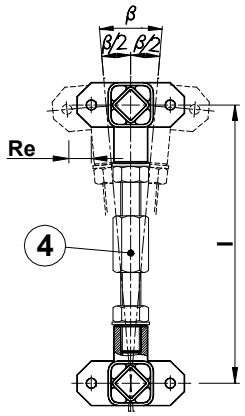


Fig 1

为使用 BT-F 组件制造悬架，我们建议参考在图 1 中所示的简图。这项系统使用一个连接单位 (4)，其首尾端具有用六角形棒车削所获取的相反的螺纹（一个右旋一个左旋）。然后给每个悬架使用活动扳手将一个 BT-F 安装至一个 BT-F S 上，这样可能校准物料滑送槽。

We recommend that you follow the diagram of figure 1 in order to make a suspension with the BT-F elements. This system focuses on the use of a link unit (4) with opposite threaded ends (right-hand and left-hand) obtained by drawing an hexagonal bar. By assembling one BT-F and one BT-F S for each suspension, with a monkey spanner you can level the chute where the material is being conveyed.

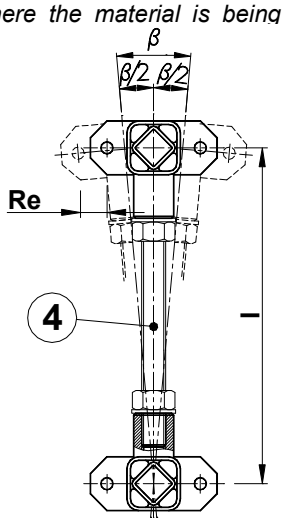


Fig 2

图 2 显示一个具不可调轴距的悬架图解。这项系统使用一个由螺纹棒制成的连接单位 (4)，在首尾端由两 个具同样螺纹（右旋或左旋）的 BT-F。一旦这个悬架在渠槽上固定，便不可再调整轴距。

Figure 2 represents the diagram of a suspension with non adjustable axle base. This system can be operated with a link unit (4) from a threaded bar with two BT-F mounted at both ends with the same thread (right-hand or left-hand). Once the suspension has been fixed to the channel, the axle base cannot be further adjusted.