

+

## 轴承 PV 值

### PV value of the bushing

#### 定义 Definition

- 负载压力 P: 定义为负荷除以轴承承受面的正投影面积 (单位: N/mm<sup>2</sup>);
  - 运转速度 V: 定义为对偶面上的相对线速度 (单位: m/s);
  - PV 值: 定义为轴承压力 P 和速度 V 的乘积 (单位: N/mm<sup>2</sup>·m/s);
  - 容许最高 PV 值:  $< \text{容许最高压力 } P \times \text{容许最高速度 } V$  (单位: N/mm<sup>2</sup>·m/s)。
- Load Pressure P: Load pressure equals to the result gained by making the value of load pressure divide the vertical shade projected by the load-shouldering surface of the bushing (Unit: N/mm<sup>2</sup>).
  - Running Velocity V: Defined running velocity as the relative linear velocity against the mating surface (Unit: N/mm).
  - PV Value: Define PV value as the result gained by multiplying the load value P and the velocity V (Unit: N/mm<sup>2</sup>·m/s).
  - permissible PV value: Max permissible value shall be smaller than the value gained by multiplying the max permissible pressure and the max permissible velocity. (Unit: N/mm<sup>2</sup>·m/s).

#### 容许最高 PV 值 Max permissible PV value

PV 值达到极限值时, 轴承可以短时间的运转。在连续的运转时, 容许最高 PV 值的选择取决于运转寿命的要求。设计时要求: 容许最高 PV 值  $< \text{容许最高压力 } P \times \text{容许最高速度 } V$ 。见右图:

The bushing can run for a short time when achieves its max PV value. It's the running service life requirement that decides the requirement for the value. In bushing design, we require that the max permissible PV value shall be smaller than the value gained by multiplying the max permissible load pressure and the max permissible running velocity.

