

## HPP16-工程塑料轴承 Plastic Plain Bearings

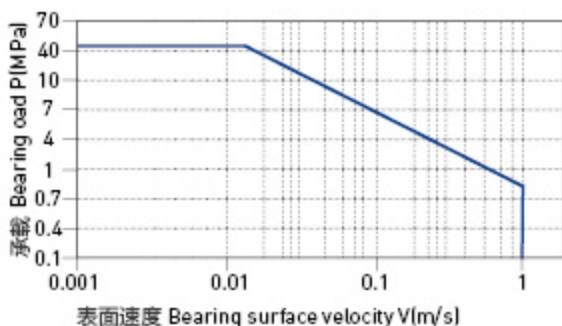
### 轴承PV值 PV Value

HPP16塑料轴承最大运行PV值为 $0.4\text{N/mm}^2 \times \text{m/s}$ ;由此决定轴承所承受的载荷与速度成反比,详情查阅图表HPP16-1。

The max PV value of the HPP16 plastic bearing is  $0.4\text{N/mm}^2 \times \text{m/s}$  which determines the load capacity of bearing is inversely proportional to the speed. Please refer to the chart for more detailed information (Graph HPP16-1).

图表 HPP16-1: PV 图表

Graph HPP16-1: Permissible PV value for HPP16



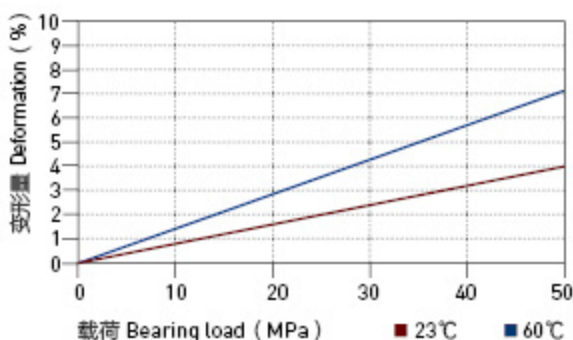
### 轴承的载荷、速度、温度 The Relation Of Load, Speed And Temperature

HPP16塑料轴承可承受最大静载荷为50Mpa,在此载荷下轴承的最大压缩变形量参考图表HPP16-2,轴承实际工作载荷略小于50Mpa,载荷还受到运行速度以及温度的影响,速度越快(Vmax: 1.0m/s)会导致摩擦温度上升,而温度上升(Tmax:130℃)会导致轴承的承载能力逐渐减弱,载荷随轴承工作温度变化情况参考图表HPP16-3。

HPP16 allows the Max static load of 50Mpa, The max compressive deformation rate under the max load is listed in Graph HPP16-2, The actual load capacity of bearing is slightly less than 50Mpa, The bearing load is variable against the speed and temperature, Fast speed (Vmax: 1.0m/s) results into higher temperature (Tmax: 130℃) which decreases the load capacity of the bearing. Please refer to the Graph HPP16-3 for such variation.

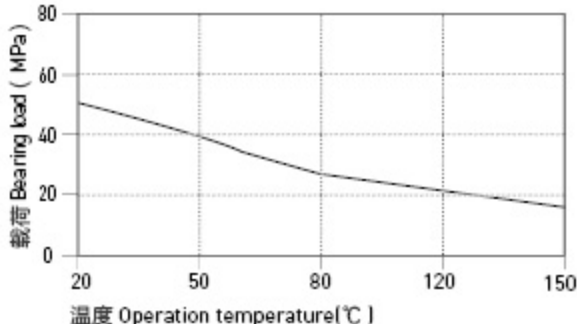
图表 HPP16-2: 载荷 - 温度 - 变形量图表

Graph HPP16-2: Load-Temperature deformation



图表 HPP16-3: 载荷 - 温度图表

Graph HPP16-3: Load-Temperature diagrams



## HPP16-工程塑料轴承 Plastic Plain Bearings

### 轴承的摩擦系数、磨损、轴材料 Friction Factor, Wear And Shaft Material

#### ■ 轴承的摩擦系数 Friction factor

图表HPP16-4表明HPP16轴承和大多数滑动轴承一样在载荷保持不变的情况下摩擦系数会随着旋转速度的增加略有升高;图表HPP16-5表明HPP16轴承摩擦系数在速度保持不变的情况下随着载荷的增加而逐步降低, 图表HPP16-6表明HPP16轴承最适合的轴表面粗糙度为Ra0.1 -0.2 $\mu$ m, 轴过于光滑或者过于粗糙都会导致摩擦系数升高。

Graph HPP16-4 shows that as the same as most of the slide bearing materials, the friction factor of HPP16 is increasing along with the rotation speed under a certain loading while as shown in Graph HPP16-5, it is decreased along with the increasing of loading when the operation speed is stable. From Graph HPP16-6, it is found that the most suitable shaft roughness is Ra0.1 to Ra0.2. Smoother shaft or rougher shaft may result into friction factor increasing.

HPP16	干运行 Dry	油脂 Grease	油 Oil	水 Water
摩擦系数 $\mu$ Friction coef.	0.06-0.20	0.09	0.04	0.04

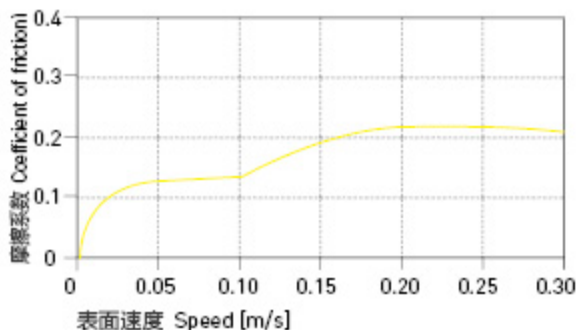
#### ■ 磨损与轴材料 Wearing and shaft material

图表HPP16-7与图表HPP16-8都表明HPP16轴承的磨损受轴材料影响比较大, 硬化钢轴和碳钢轴比较适合此轴承。图表HPP16-8表明HPP16在摆动运动时选择硬铬钢轴和硬化钢轴比较适合, 而在旋转运动中则选择碳钢轴和硬化钢轴交理想。

Graph HPP16-7 and Graph HPP16-8 shows the wearing is considerably affected by the shaft materials. Heat-treated steel shaft and carbon steel shaft is good for this bearing material. Graph HPP16-8 tells that HPP16 is suitable for hardened chrome steel and hardened steel shaft in oscillation operation and is suitable for carbon steel and hardened steel shaft in rotation operation.

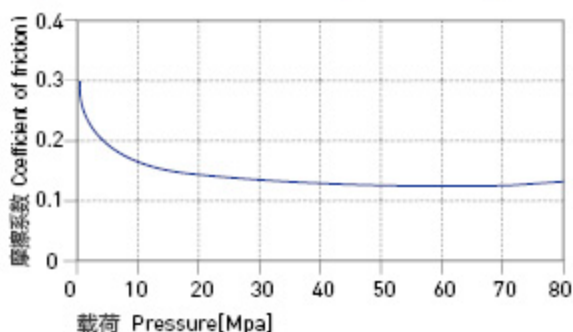
图表 HPP16-4: 摩擦系数与速度变化关系图表 P=2MPa

Graph HPP16-4: Coefficient of friction & the speed of bearing, P=2Mpa



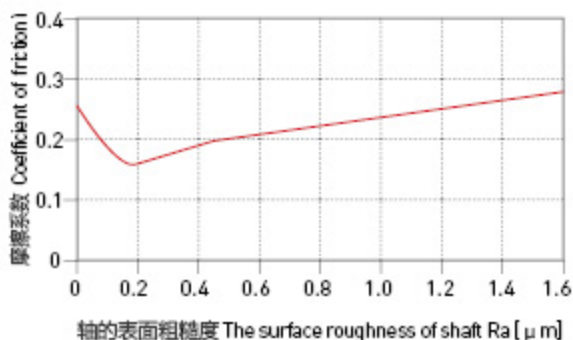
图表 HPP16-5: 摩擦系数与载荷变化关系图表 v=0.2m/s

Graph HPP16-5: Coefficient of friction & the pressure of bearing, v=0.2m/s



图表 HPP11-6: 摩擦系数与轴表面粗糙度关系图表

Graph HPP11-6: Coefficient of friction & the surface roughness of shaft



## HPP16-工程塑料轴承 Plastic Plain Bearings

### 轴承的摩擦系数、磨损、轴材料 Friction Factor, Wear And Shaft Material

#### ■ 化学抗性 Chemical Resistance

HPP16塑料轴承能抵抗部分弱酸以及各类润滑油的腐蚀。

HPP16 is good at chemical resistance against weak acidic medium and various kinds of lubricants.

#### ■ 吸水性 Water Absorbability

在标准大气压中, HPP16 塑料轴承的吸水率为 0.2%, 浸泡水中最大平衡吸水率为 0.4%; 由于此吸水率的特性, 此轴承可以应用于一般潮湿环境。

The water absorb rate of HPP16 is 0.2% under the atmospheric pressure while it is 0.4% when the material is immersed into water. With its low water absorbability, the material is suitable for humid environment applications.

#### ■ 抗UV性能 UV Resistance

HPP16 长久暴露在紫外线下颜色会发生褪变。材料性能会有所下降。

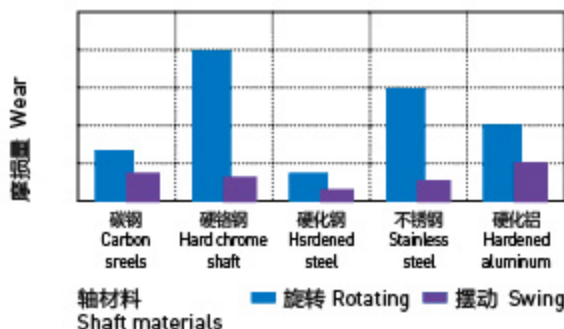
Disintegration could be possible for the material HPP11 after long period of exposing under the UV ray and therefore the compressive strength will be reduced.

#### ■ 安装公差 Installation Tolerances

HPP16 塑料轴承压装后公差 Tolerances after pressfit

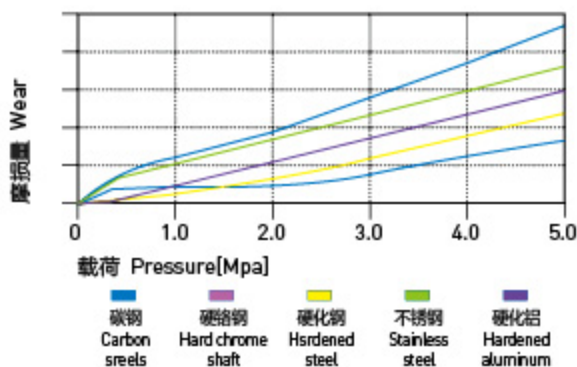
直径 Di. [ mm ]	HPP16 E10 [ mm ]	座孔 Housing H7 [ mm <sup>2</sup> ]	轴 Shaft h9 [ mm <sup>2</sup> ]
> 0-3	+0.014~+0.054	0~+0.010	0~-0.025
> 3-6	+0.020~+0.068	0~+0.012	0~-0.030
> 6-10	+0.025~+0.083	0~+0.015	0~-0.036
> 10-18	+0.032~+0.102	0~+0.018	0~-0.043
> 18-30	+0.040~+0.124	0~+0.021	0~-0.052
> 30-50	+0.050~+0.150	0~+0.025	0~-0.062
> 50-80	+0.060~+0.180	0~+0.030	0~-0.074
> 80-120	+0.072~+0.212	0~+0.035	0~-0.087
> 120-180	+0.085~+0.245	0~+0.040	0~-0.100

图表 HPP16-7: 在不同轴材料上旋转时的磨损量  $P=2MPa, v=0.2m/s$   
Graph HPP16-7: The bearing wear under rotating with different shaft materials,  $p=2MPa, v=0.2m/s$



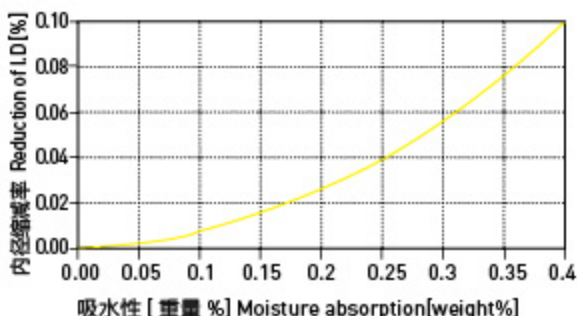
图表 HPP16-8: 旋转磨损随轴材料与压力变化关系  $v=0.2m/s$

Graph HPP16-8: The bearing wear & pressure under rotating with different shaft materials,  $v=0.2m/s$

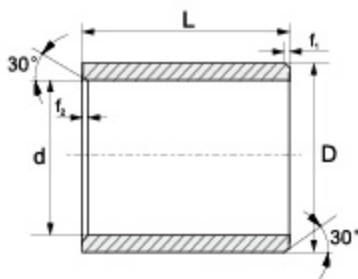


图表 HPP16-9: 吸水性的影响

Graph HPP16-9: Effect of moisture absorption on HPP16 bearings



## HPP16 标准规格 Standard 直套 Metric Cylindrical Bushings



推荐安装公差 Recommend fitting

tolerance:

座孔 Housing: H7

轴 Shaft: h9

订购编码 Order P/N:

HPP16-0203-03

材料 Material

d	f <sub>1</sub>	f <sub>2</sub>
1-6	0.3	0.5
6-12	0.5	
12-30	0.8	
>30	1.2	

订购编码 Order PN	d [mm]	d- 公差 After fitting [mm]	D [mm]	L[h13] [mm]
HPP16-0203-03	2	+0.014/+0.054	3.5	3
HPP16-0304-03	3	+0.014/+0.054	4.5	3
HPP16-0304-05	3	+0.014/+0.054	4.5	5
HPP16-0304-06	3	+0.014/+0.054	4.5	6
HPP16-0405-04	4	+0.02/+0.068	5.5	4
HPP16-0405-06	4	+0.02/+0.068	5.5	6
HPP16-0506-05S	5	+0.01/+0.04	6	5
HPP16-0507-05	5	+0.02/+0.068	7	5
HPP16-0507-08	5	+0.02/+0.068	7	8
HPP16-0507-10	5	+0.02/+0.068	7	10
HPP16-0608-04	6	+0.02/+0.068	8	4
HPP16-0608-05	6	+0.02/+0.068	8	5
HPP16-0608-06	6	+0.02/+0.068	8	6
HPP16-0608-08	6	+0.02/+0.068	8	8
HPP16-0608-09	6	+0.02/+0.068	8	9
HPP16-0608-10	6	+0.02/+0.068	8	10
HPP16-0608-11	6	+0.02/+0.068	8	11
HPP16-0810-05	8	+0.025/+0.083	10	5
HPP16-0810-06	8	+0.025/+0.083	10	6
HPP16-0810-07	8	+0.025/+0.083	10	7
HPP16-0810-08	8	+0.025/+0.083	10	8
HPP16-0810-10	8	+0.025/+0.083	10	10
HPP16-0810-12	8	+0.025/+0.083	10	12
HPP16-0810-13	8	+0.025/+0.083	10	13
HPP16-0810-15	8	+0.025/+0.083	10	15
HPP16-0810-21	8	+0.025/+0.083	10	21
HPP16-1011-06	10	+0.025/+0.083	11	6
HPP16-1012-04	10	+0.025/+0.083	12	4
HPP16-1012-05	10	+0.025/+0.083	12	5
HPP16-1012-06	10	+0.025/+0.083	12	6
HPP16-1012-07	10	+0.025/+0.083	12	7
HPP16-1012-08	10	+0.025/+0.083	12	8
HPP16-1012-09	10	+0.025/+0.083	12	9
HPP16-1012-10	10	+0.025/+0.083	12	10
HPP16-1012-12	10	+0.025/+0.083	12	12
HPP16-1012-14	10	+0.025/+0.083	12	14

订购编码 Order PN	d [mm]	d- 公差 After fitting [mm]	D [mm]	L[h13] [mm]
HPP16-1012-15	10	+0.025/+0.083	12	15
HPP16-1012-17	10	+0.025/+0.083	12	17
HPP16-1012-20	10	+0.025/+0.083	12	20
HPP16-1213-12S	12	+0.016/+0.059	13	12
HPP16-1214-04	12	+0.032/+0.102	14	4
HPP16-1214-06	12	+0.032/+0.102	14	6
HPP16-1214-08	12	+0.032/+0.102	14	8
HPP16-1214-10	12	+0.032/+0.102	14	10
HPP16-1214-12	12	+0.032/+0.102	14	12
HPP16-1214-14	12	+0.032/+0.102	14	14
HPP16-1214-15	12	+0.032/+0.102	14	15
HPP16-1214-20	12	+0.032/+0.102	14	20
HPP16-1214-25	12	+0.032/+0.102	14	25
HPP16-1315-15	13	+0.032/+0.102	15	15
HPP16-1315-25	13	+0.032/+0.102	15	25
HPP16-1416-03	14	+0.032/+0.102	16	3
HPP16-1416-08	14	+0.032/+0.102	16	8
HPP16-1416-10	14	+0.032/+0.102	16	10
HPP16-1416-15	14	+0.032/+0.102	16	15
HPP16-1416-20	14	+0.032/+0.102	16	20
HPP16-1416-25	14	+0.032/+0.102	16	25
HPP16-1517-10	15	+0.032/+0.102	17	10
HPP16-1517-12	15	+0.032/+0.102	17	12
HPP16-1517-15	15	+0.032/+0.102	17	15
HPP16-1517-20	15	+0.032/+0.102	17	20
HPP16-1517-25	15	+0.032/+0.102	17	25
HPP16-1618-10	16	+0.032/+0.102	18	10
HPP16-1618-12	16	+0.032/+0.102	18	12
HPP16-1618-15	16	+0.032/+0.102	18	is
HPP16-1618-20	16	+0.032/+0.102	18	20
HPP16-1618-25	16	+0.032/+0.102	18	25
HPP16-1618-30	16	+0.032/+0.102	18	30
HPP16-1820-10	18	+0.032/+0.102	20	10
HPP16-1820-12	18	+0.032/+0.102	20	12
HPP16-1820-15	18	+0.032/+0.102	20	15
HPP16-1820-20	18	+0.0321/+0.102	20	20

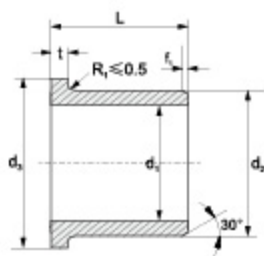
订购编码 Order PN	d [mm]	d- 公差 After fitting [mm]	D [mm]	L(h13) [mm]
HPP16-1820-25	18	+0.032/+0.102	20	25
HPP16-2022-20	20	+0.04/+0.124	22	20
HPP16-2022-30	20	+0.04/+0.124	22	30
HPP16-2023-10	20	+0.04/+0.124	23	10
HPP16-2023-15	20	+0.04/+0.124	23	15
HPP16-2023-20	20	+0.04/+0.124	23	20
HPP16-2023-25	20	+0.04/+0.124	23	25
HPP16-2023-30	20	+0.04/+0.124	23	30
HPP16-2225-15	22	+0.04/+0.124	25	15
HPP16-2225-20	22	+0.04/+0.124	25	20
HPP16-2225-25	22	+0.04/+0.124	25	25
HPP16-2225-30	22	+0.04/+0.124	25	30
HPP16-2528-12	25	+0.04/+0.124	28	12
HPP16-2528-15	25	+0.04/+0.124	28	15
HPP16-2528-20	25	+0.04/+0.124	28	20
HPP16-2528-24	25	+0.04/+0.124	28	24
HPP16-2528-25	25	+0.04/+0.124	28	25
HPP16-2528-30	25	+0.04/+0.124	28	30
HPP16-2528-35	25	+0.04/+0.124	28	35
HPP16-2832-30	28	+0.04/+0.124	32	30
HPP16-3034-15	30	+0.04/+0.124	34	15
HPP16-3034-20	30	+0.04/+0.124	34	20
HPP16-3034-24	30	+0.04/+0.124	34	24
HPP16-3034-25	30	+0.04/+0.124	34	25
HPP16-3034-30	30	+0.04/+0.124	34	30
HPP16-3034-35	30	+0.04/+0.124	34	35
HPP16-3034-40	30	+0.04/+0.124	34	40
HPP16-3236-30	32	+0.05/+0.15	36	30
HPP16-3236-40	32	+0.05/+0.15	36	40
HPP16-3539-14	35	+0.05/+0.15	39	14
HPP16-3539-20	35	+0.05/+0.15	39	20
HPP16-3539-25	35	+0.05/+0.15	39	25
HPP16-3539-30	35	+0.05/+0.15	39	30

订购编码 Order PN	d [mm]	d- 公差 After fitting [mm]	D [mm]	L(h13) [mm]
HPP16-3539-40	35	+0.05/+0.15	39	4C
HPP16-3539-50	35	+0.05/+0.15	39	5C
HPP16-3640-20	36	+0.05/+0.15	40	20
HPP16-4044-10	40	+0.05/+0.15	44	10
HPP16-4044-16	40	+0.05/+0.15	44	16
HPP16-4044-20	40	+0.05/+0.15	44	20
HPP16-4044-30	40	+0.05/+0.15	44	30
HPP16-4044-40	40	+0.05/+0.15	44	40
HPP16-4044-50	40	+0.05/+0.15	44	50
HPP16-4246-40	42	+0.05/+0.15	46	40
HPP16-4246-50	42	+0.05/+0.15	46	50
HPP16-4550-40	45	+0.05/+0.15	50	40
HPP16-4550-50	45	+0.05/+0.15	50	50
HPP16-5055-20	50	+0.05/+0.15	55	20
HPP16-5055-30	50	+0.05/+0.15	55	30
HPP16-5055-40	50	+0.05/+0.15	55	40
HPP16-5055-50	50	+0.05/+0.15	55	50
HPP16-5560-20	55	+0.06/+0.18	60	20
HPP16-5560-26	55	+0.06/+0.18	60	26
HPP16-5560-40	55	+0.06/+0.18	60	40
HPP16-5560-50	55	+0.06t+0.18	60	50
HPP16-5560-60	55	+0.06/+0.18	60	60
HPP16-6065-30	60	+0.06/+0.18	65	30
HPP16-6065-40	60	+0.06/+0.18	65	40
HPP16-6065-50	60	+0.06/+0.18	65	50
HPP16-6065-60	60	+0.06/+0.18	65	60
HPP16-6570-50	65	+0.06/+0.18	70	50
HPP16-7075-60	70	+0.06/+0.18	75	60
HPP16-7580-40	75	+0.06/+0.18	80	40
HPP16-115121-90	115	+0.072/+0.212	121	90
HPP16-120125-100	120	+0.072/+0.212	125	100

\*d 公差为压入标准 H7 座孔 (ISO3547-1) 后公差

\*Tolerance d: after being pressed into housing H7|ISO3547-1)

## 翻边轴套 Metric Flange Bushings



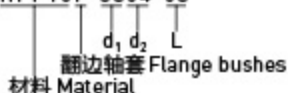
推荐安装公差 Recommend fitting tolerance:

座孔 Housing: H7

轴 Shaft: h9

订购编码 Order P/N:

HPP16F-0304-03


 翻边轴套 Flange bushes  
 材料 Material

d	f
1-6	0.3
6-12	0.5
12-30	0.8
>30	1.2

订购编码 Order PN	d <sub>1</sub> [mm]	d <sub>1</sub> - 公差 After fitting [mm]	d <sub>2</sub> [mm]	d <sub>2</sub> [d13] [mm]	L[h13] [mm]	t <sub>0.15</sub> [mm]
HPP16F-0304-03	3	+0.014/+0.054	4.5	7.5	3	0.75
HPP16F-0304-05	3	+0.014/+0.054	4.5	7.5	5	0.75
HPP16F-0405-03	4	+0.02/+0.068	5.5	9.5	3	0.75
HPP16F-0405-04	4	+0.02/+0.068	5.5	9.5	4	0.75
HPP16F-0405-06	4	+0.02/+0.068	5.5	9.5	6	0.75
HPP16F-0506-3.5S	5	+0.01/+0.04	6	10	3.5	0.5
HPP16F-0506-05S	5	+0.01/+0.04	6	10	5	0.5
HPP16F-050614-06S	5	+0.01/+0.04	6	14	6	0.5
HPP16F-0507-03	5	+0.02/+0.068	7	11	3	1
HPP16F-0507-04	5	+0.02/+0.068	7	11	4	1
HPP16F-0507-05	5	+0.02/+0.068	7	11	5	1
HPP16F-0507-07	5	+0.02/+0.068	7	11	7	1
HPP16F-0607-10	6	+0.01/+0.04	7	11	10	0.5
HPP16F-0608-04	6	+0.02/+0.068	8	12	4	1
HPP16F-0608-05	6	+0.02/+0.068	8	12	5	1
HPP16F-0608-06	6	+0.02/+0.068	8	12	6	1
HPP16F-0608-07	6	+0.02/+0.068	8	12	7	1
HPP16F-0608-08	6	+0.02/+0.068	8	12	8	1
HPP16F-0608-10	6	+0.02/+0.068	8	12	10	1
HPP16F-0708-08S	7	+0.013/+0.049	8	12	8	0.5
HPP16F-0809-12	8	+0.013/+0.049	9	13	12	0.5
HPP16F-0810-04	8	+0.025/+0.083	10	15	4	1
HPP16F-0810-05	8	+0.025/+0.083	10	15	5	1
HPP16F-0810-07	8	+0.025/+0.083	10	15	7	1
HPP16F-0810-09	8	+0.025/+0.083	10	15	9	1
HPP16F-0810-10	8	+0.025/+0.083	10	15	10	1
HPP16F-0810-15	8	+0.025/+0.083	10	15	15	1
HPP16F-0810-30	8	+0.025/+0.083	10	15	30	1
HPP16F-1012-04	10	+0.025/+0.083	12	18	4	1
HPP16F-1012-05	10	+0.025/+0.083	12	18	5	1
HPP16F-1012-06	10	+0.025/+0.083	12	18	6	1
HPP16F-1012-07	10	+0.025/+0.083	12	18	7	1
HPP16F-1012-09	10	+0.025/+0.083	12	18	9	1
HPP16F-1012-10	10	+0.025/+0.083	12	18	10	1
HPP16F-1012-12	10	+0.025/+0.083	12	18	12	1
HPP16F-1012-15	10	+0.025/+0.083	12	18	15	1
HPP16F-1012-17	10	+0.025/+0.083	12	18	17	1
HPP16F-101216-06	10	+0.025/+0.083	12	16	6	1
HPP16F-101216-09	10	+0.025/+0.083	12	16	9	1
HPP16F-1213-12S	12	+0.016/+0.059	13	17	12	0.5
HPP16F-1214-06	12	+0.032/+0.102	14	20	6	1
HPP16F-1214-07	12	+0.032/+0.102	14	20	7	1
HPP16F-1214-09	12	+0.032/+0.102	14	20	9	1
HPP16F-1214-10	12	+0.032/+0.102	14	20	10	1
HPP16F-1214-11	12	+0.032/+0.102	14	20	11	1
HPP16F-1214-12	12	+0.032/+0.102	14	20	12	1
HPP16F-1214-15	12	+0.032/+0.102	14	20	15	1

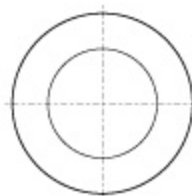
订购编码 Order PN	d <sub>1</sub> [mm]	d <sub>1</sub> - 公差 After fitting [mm]	d <sub>2</sub> [mm]	d <sub>2</sub> [d13] [mm]	L[h13] [mm]	t <sub>0.15</sub> [mm]
HPP16F-1214-17	12	+0.032/+0.102	14	20	17	1
HPP16F-1214-20	12	+0.032/+0.102	14	20	20	1
HPP16F-1214-24	12	+0.032/+0.102	14	20	24	1
HPP16F-1416-03	14	+0.032/+0.102	16	22	3	1
HPP16F-1416-04	14	+0.032/+0.102	16	22	4	1
HPP16F-1416-06	14	+0.032/+0.102	16	22	6	1
HPP16F-1416-08	14	+0.032/+0.102	16	22	8	1
HPP16F-1416-12	14	+0.032/+0.102	16	22	12	1
HPP16F-1416-17	14	+0.032/+0.102	16	22	17	1
HPP16F-1416-21	14	+0.032/+0.102	16	22	21	1
HPP16F-1517-05	15	+0.032/+0.102	17	23	5	1
HPP16F-1517-09	15	+0.032/+0.102	17	23	9	1
HPP16F-1517-12	15	+0.032/+0.102	17	23	12	1
HPP16F-1517-17	15	+0.032/+0.102	17	23	17	1
HPP16F-1517-20	15	+0.032/+0.102	17	23	20	1
HPP16F-1618-09	16	+0.032/+0.102	18	24	9	1
HPP16F-1618-12	16	+0.032/+0.102	18	24	12	1
HPP16F-1618-17	16	+0.032/+0.102	18	24	17	1
HPP16F-1618-21	16	+0.032/+0.102	18	24	21	1
HPP16F-1719-09	17	+0.032/+0.102	19	25	9	1
HPP16F-1719-25	17	+0.032/+0.102	19	25	25	1
HPP16F-1820-04	18	+0.032/+0.102	20	26	4	1
HPP16F-1820-06	18	+0.032/+0.102	20	26	6	1
HPP16F-1820-11	18	+0.032/+0.102	20	26	11	1
HPP16F-1820-12	18	+0.032/+0.102	20	26	12	1
HPP16F-1820-17	18	+0.032/+0.102	20	26	17	1
HPP16F-1820-22	18	+0.032/+0.102	20	26	22	1
HPP16F-1820-30	18	+0.032/+0.102	20	26	30	1
HPP16F-2023-3.2	20	+0.04/+0.124	23	30	3.2	1.5
HPP16F-2023-07	20	+0.04/+0.124	23	30	7	1.5
HPP16F-2023-11.5	20	+0.04/+0.124	23	30	11.5	1.5
HPP16F-2023-16.5	20	+0.04/+0.124	23	30	16.5	1.5
HPP16F-2023-21.5	20	+0.04/+0.124	23	30	21.5	1.5
HPP16F-222535-09	22	+0.04/+0.124	25	35	9	1.5
HPP16F-2427-10	24	+0.04/+0.124	27	32	10	1.5
HPP16F-2528-11.5	25	+0.04/+0.124	28	35	11.5	1.5
HPP16F-2528-16.5	25	+0.04/+0.124	28	35	16.5	1.5
HPP16F-2528-21.5	25	+0.04/+0.124	28	35	21.5	1.5
HPP16F-2528-30	25	+0.04/+0.124	28	35	30	1.5
HPP16F-2830-36	28	+0.04/+0.124	30	35	36	2
HPP16F-3032-12	30	+0.04/+0.124	32	37	12	1
HPP16F-3034-16	30	+0.04/+0.124	34	42	16	2
HPP16F-3034-20	30	+0.04/+0.124	34	42	20	2
HPP16F-3034-26	30	+0.04/+0.124	34	42	26	2
HPP16F-3034-37	30	+0.04/+0.124	34	42	37	2
HPP16F-3034-45	30	+0.04/+0.124	34	42	45	2
HPP16F-3236-16	32	+0.05/+0.15	36	40	16	2

订购编码 Order PN	$d_1$ [mm]	$d_1$ -公差 After fitting [mm]	$d_2$ [mm]	$d_2[d13]$ [mm]	L[h13] [mm]	$t_{-0.12}$ [mm]
HPP16F-3236-26	32	+0.05/+0.15	36	40	26	2
HPP16F-3539-07	35	+0.05/+0.15	39	47	7	2
HPP16F-3539-12	35	+0.05/+0.15	39	47	12	2
HPP16F-3539-16	35	+0.05/+0.15	39	47	16	2
HPP16F-3539-26	35	+0.05/+0.15	39	47	26	2
HPP16F-3539-36	35	+0.05/+0.15	39	47	36	2
HPP16F-4044-14	40	+0.05/+0.15	44	52	14	2
HPP16F-4044-20	40	+0.05/+0.15	44	52	20	2
HPP16F-4044-30	40	+0.05/+0.15	44	52	30	2
HPP16F-4044-40	40	+0.05/+0.15	44	52	40	2
HPP16F-4044-50	40	+0.05/+0.15	44	52	50	2
HPP16F-4246-50	42	+0.05/+0.15	46	53	50	2
HPP16F-4550-30	45	+0.05/+0.15	50	58	30	2
HPP16F-4550-50	45	+0.05/+0.15	50	58	50	2

订购编码 Order PN	$d_1$ [mm]	$d_1$ -公差 After fitting [mm]	$d_2$ [mm]	$d_2[d13]$ [mm]	L[h13] [mm]	$t_{-0.12}$ [mm]
HPP16F-5055-10	50	+0.05/+0.15	55	63	10	2
HPP16F-5055-40	50	+0.05/+0.15	55	63	40	2
HPP16F-5055-50	50	+0.05/+0.15	55	63	50	2
HPP16F-6065-07	60	+0.06/+0.18	65	73	7	2
HPP16F-6065-22	60	+0.06/+0.18	65	73	22	2
HPP16F-6065-30	60	+0.06/+0.18	65	73	30	2
HPP16F-6065-50	60	+0.06/+0.18	65	73	50	2
HPP16F-6570-50	65	+0.06/+0.18	70	78	50	2
HPP16F-7075-50	70	+0.06/+0.18	75	83	50	2
HPP16F-9095-11	90	+0.072/+0.212	95	103	11	2.5
HPP16F-100105-11.5	100	+0.072/+0.212	105	113	11.5	2.5
HPP16F-100105-100	100	+0.072/+0.212	105	113	100	2.5

\* $d_1$  公差为压入标准 H7 座孔 (ISO3547-1) 后公差\*Tolerance  $d_1$ : after being pressed into housing H7(ISO3547-1)

## 垫片 Metric Thrust Washers



订购编码 Order PN:

HPP16 W-0509-006

$d$   $D$   $T$   
 垫片 Washer  
 材料 Material

订购编码 Order PN	$d^{+0.25}$ [mm]	$D_{-0.25}$ [mm]	$T_{-0.05}$ [mm]
HPP16W-0509-006	5	9	0.6
HPP16W-0615-015	6	15	1.5
HPP16W-0620-015	6	20	1.5
HPP16W-0815-005	8	15	0.5
HPP16W-0815-015	8	15	1.5
HPP16W-0818-010	8	18	1.0
HPP16W-0818-015	8	18	1.5
HPP16W-1018-010	10	18	1.0
HPP16W-1018-015	10	18	1.5
HPP16W-1018-020	10	18	2.0
HPP16W-1224-015	12	24	1.5
HPP16W-1426-015	14	26	1.5
HPP16W-1524-015	15	24	1.5
HPP16W-1630-015	16	30	1.5

订购编码 Order PN	$d^{+0.25}$ [mm]	$D_{-0.25}$ [mm]	$T_{-0.05}$ [mm]
HPP16W-1832-015	18	32	1.5
HPP16W-2036-015	20	36	1.5
HPP16W-2238-015	22	38	1.5
HPP16W-2442-015	24	42	1.5
HPP16W-2640-0075	26	40	0.75
HPP16W-2644-015	26	44	1.5
HPP16W-2848-015	28	48	1.5
HPP16W-3254-015	32	54	1.5
HPP16W-3862-015	38	62	1.5
HPP16W-4266-015	42	66	1.5
HPP16W-4874-020	48	74	2.0
HPP16W-5278-020	52	78	2.0
HPP16W-6290-020	62	90	2.0

\* 根据要求提供定位孔设计 The fixing bore design upon request