

IAP/IAM 系列定量斜盘式轴向柱塞泵 / 马达

IAP/IAM Serial Fixed Displacement Swash Plate Axial Piston Pump/Motor

1、概述 Description

直轴斜盘结构的轴向柱塞元件，具有固定排量，在开式或闭式回路中用作静液压传动的泵和马达。当作为泵工作时，流量与驱动转速和排量成正比。当作为马达工作时，输出转速与流量成正比而与排量成反比。输出扭矩随高压侧与低压侧之间的压差而加大。

Axial piston swash plate unit is designed with fixed displacement, and used as either pump or motor in hydrostatic driver, in open or closed circuit. If operated as a pump, the flow is proportional to the drive speed and displacement. If operated as a motor, the output speed is proportional to the flow and inversely proportional to displacement. The output torque varies with the pressure drop between inlet and outlet ports.

2、特点 Special Features

- 带有久经考验的球面配流盘的高性能旋转组件具有自动对中、圆周速度低、效率高的优点。

High performance rotary group with well-proven spherical control area has the advantages: self-centering, low peripheral speed, high efficiency.

- 卓越自吸能力和转速

Excellent self-priming capability and max. speed.

- ISO 安装法兰，轴向和径向尺寸小，结构紧凑，功率集成度高。

ISO mounting flange, compact design for axial and radial dimensions, high specific power.

- 马达控制用的各种阀可以安装在马达上。

Various control valves are available for IAM motor.

- 噪音低。

Low noise.

订货型号

Ordering Code

斜盘式定量柱塞泵: IAP
Swash plate fixed pump: IAP
斜盘式定量柱塞马达: IAM
Swash plate fixed motor: IAM

IAP

63

R

N

A

1

排量 (ml/rev) Displacement

25	28	32	40	45	50	56	63
70	80	90	100	107	112	120	125
140	160	180					

旋转方向 (面向输出轴看)
顺时针方向: R Direction of rotation
逆时针方向: L
双向转动: W

通油盘 (Plate): 1、2、3、4、5

轴伸结构 Shaft end
I型 II型
DIN5480花键 Z A Spline
平键 P B Parallel key

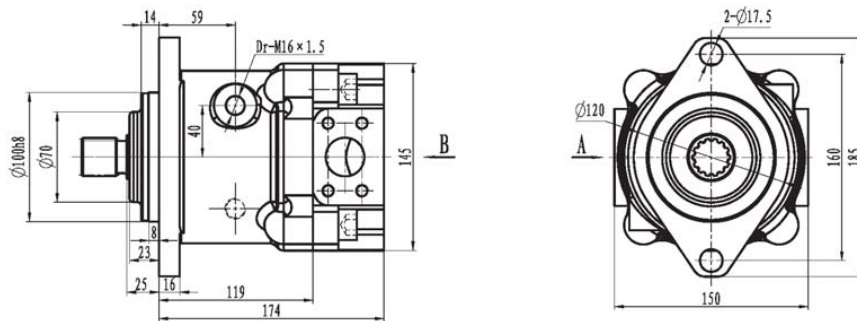
密封 Seals
丁腈橡胶 N
氟橡胶 F

订货示例

IAM63WNA3
IAM定量马达
排量: 63ml/rev
旋转方向: W双向
密封: N丁腈橡胶
轴伸: A花键
通油盘: 3号通油盘

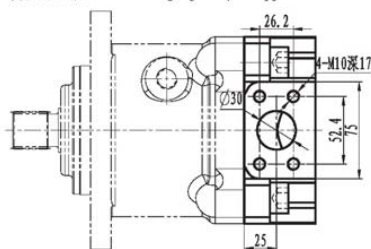
IAP/IAM 技术参数 Specifications

排量 (ml/rev) Displacement Vg (ml/rev)	最高转速 Max. Speed Ω_{max} (rpm)	最高压力 Max. Pressure Pmax (bar)	当量扭矩 Specific Torque Tk (N.m/bar)	扭矩在 Torque At P=350bar	壳体注油量 Case Volume L	质量 Mass Kg
25	3500	350	0.398	139.3	0.3	20
28	3500	350	0.446	156.1	0.3	20
32	3500	350	0.509	178.2	0.3	20
40	3500	350	0.637	222.9	0.3	20
45	3500	350	0.725	253.8	0.5	28
50	3500	350	0.796	278.6	0.5	28
56	3500	350	0.89	280	0.5	28
63	3500	350	1.003	351	0.5	28
70	3000	350	1.115	390.2	0.7	35
80	3000	350	1.274	445.9	0.7	35
90	3000	350	1.433	501.6	0.7	35
100	3000	350	1.592	557.2	0.9	42
107	3000	350	1.704	596.4	0.9	42
112	3000	350	1.783	624.1	0.9	42
120	3000	350	1.91	668.5	0.9	42
125	3000	350	1.99	696.5	1.1	51
140	3000	350	2.229	780.2	1.1	51
160	2500	350	2.547	891.5	1.1	51
180	2250	350	2.866	1003.1	1.1	51

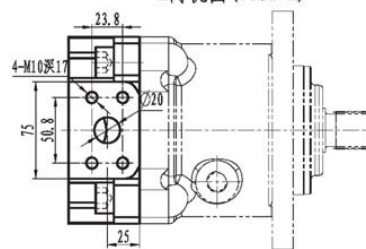


通油盘型式: 1 用于泵 (开式系统) Used as pump in open circuits

1-侧面法兰油口 SAE flange ports, at opposite side

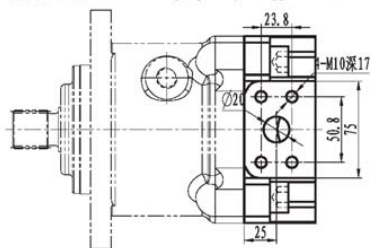


A向视图 (view A)

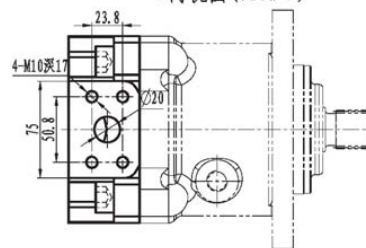


通油盘型式: 2 用于马达 (开式、闭式系统) Used as pump or motor in open or closed circuits

2-侧面法兰油口 SAE flange ports, at opposite side

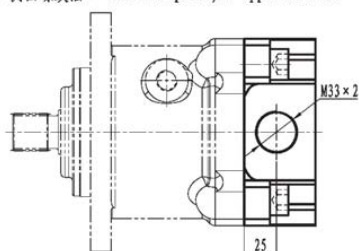


A向视图 (view A)

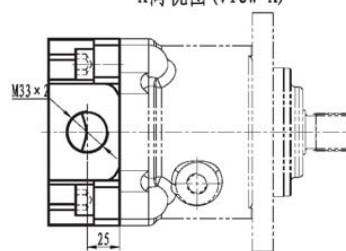


通油盘型式: 3 用于马达 (开式、闭式系统) Used as motor in open or closed circuits

3-侧面螺纹油口 Threaded ports, at opposite side

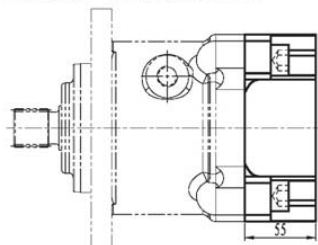


A向视图 (view A)

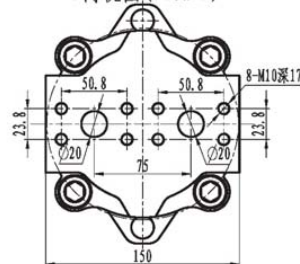


通油盘型式: 4 用于马达 (开式、闭式系统) Used as motor in open or closed circuits

4-端面法兰油口 SAE flange ports, rear

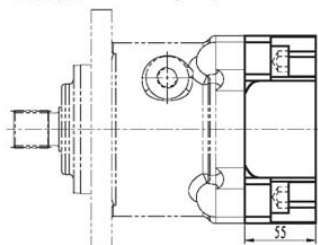


B向视图 (View B)

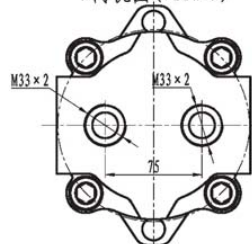


通油盘型式: 5 用于马达 (开式、闭式系统) Used as motor in open or closed circuits

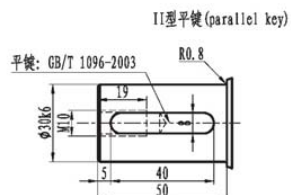
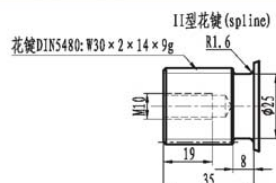
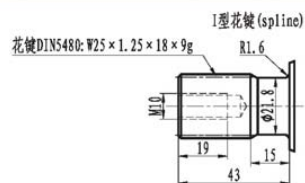
5-端面螺纹油口 Threaded ports, rear



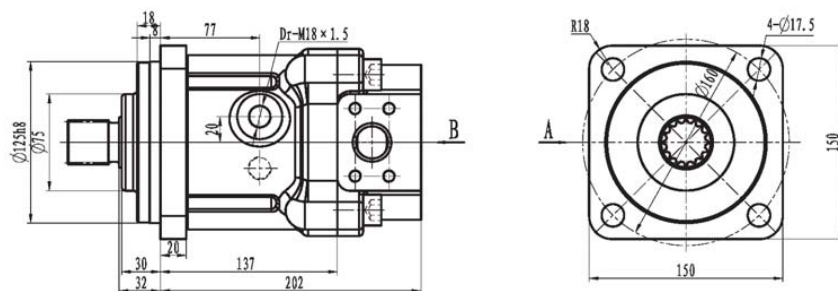
B向视图 (View B)



轴伸结构 Shaft end



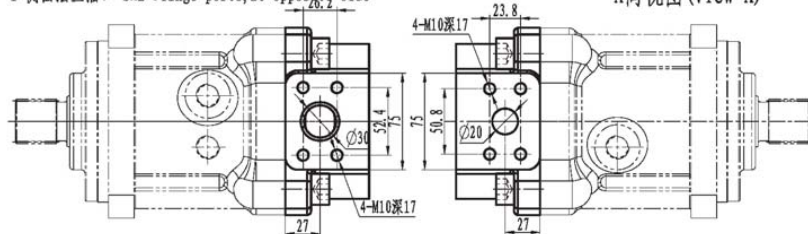
45 50 56 63



通油盘型式: 1 用于泵 (开式系统) Used as pump in open circuits

1-侧面法兰油口 SAE flange ports, at opposite side

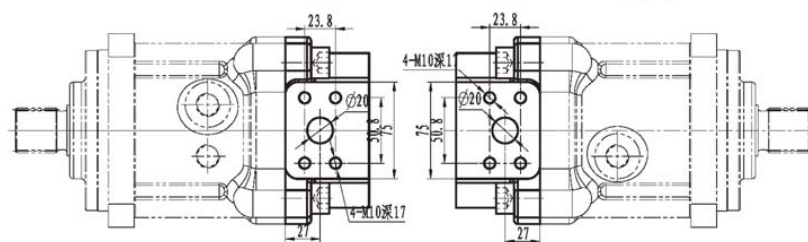
A向视图 (view A)



通油盘型式: 2 用于马达 (开式、闭式系统) Used as pump or motor in open or closed circuits

2-侧面法兰油口 SAE flange ports, at opposite side

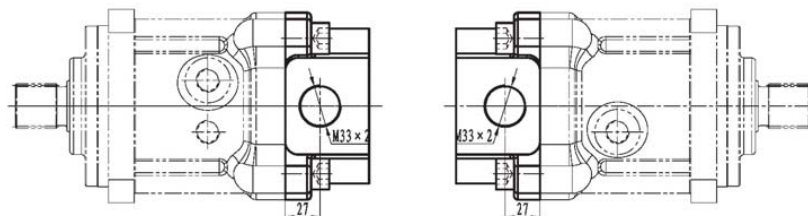
A向视图 (view A)



通油盘型式: 3 用于马达 (开式、闭式系统) Used as motor in open or closed circuits

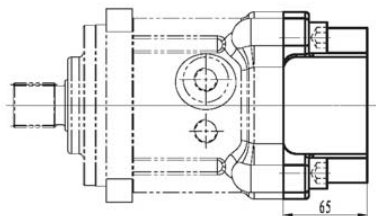
3-侧面螺纹油口 Threaded ports, at opposite side

A向视图 (view A)

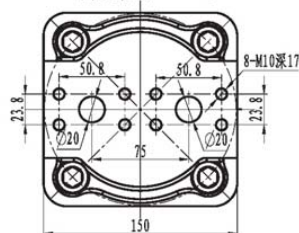


通油盘型式: 4 用于马达 (开式、闭式系统) Used as motor in open or closed circuits

4-端面法兰油口 SAE flange ports, rear

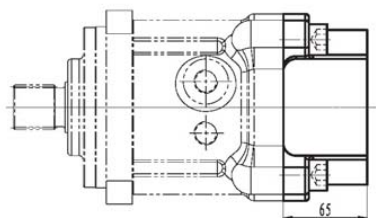


B向视图 (View B)

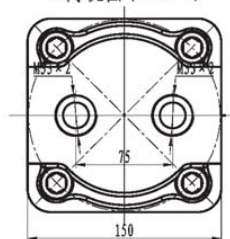


通油盘型式: 5 用于马达 (开式、闭式系统) Used as motor in open or closed circuits

5-端面螺纹油口 Threaded ports, rear



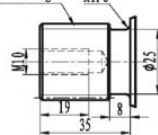
B向视图 (View B)



轴伸结构: Shaft end

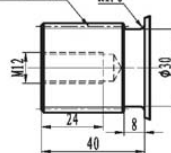
I型花键 (spline)

花键DIN5480: W30 × 2 × 14 × 9g



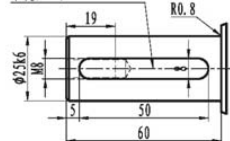
II型花键 (spline)

花键DIN5480: W35 × 2 × 16 × 9g



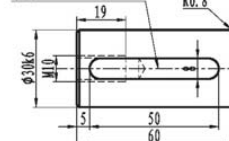
I型平键 (parallel key)

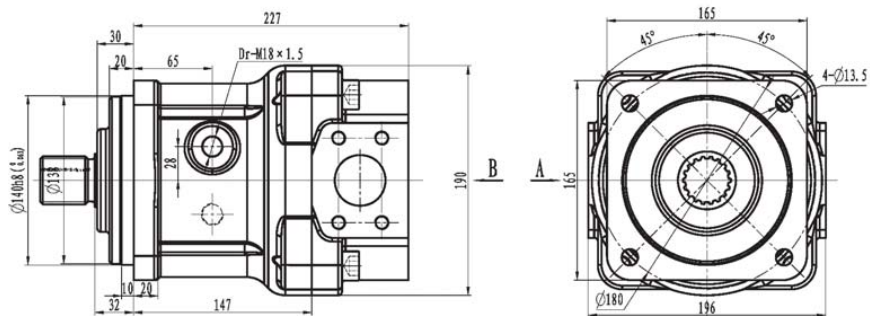
平键: GB/T 1096-2003



II型平键 (parallel key)

平键: GB/T 1096-2003

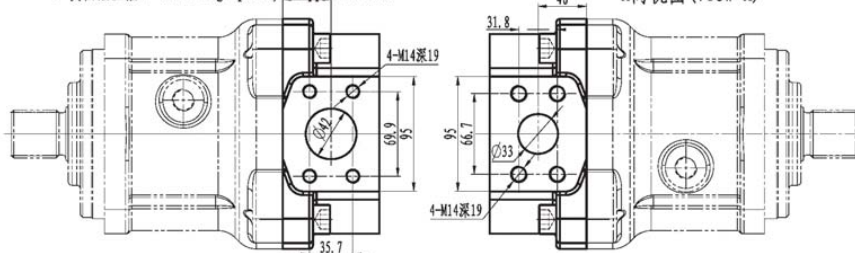




通油盘型式: 1 用于泵 (开式系统) Used as pump in open circuits

1-侧面法兰油口 SAE flange ports, at opposite side

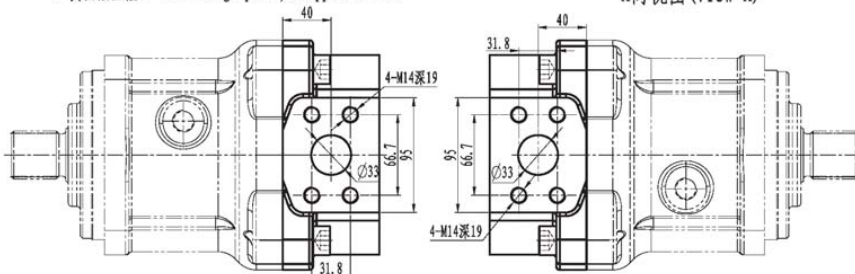
A向视图 (view A)



通油盘型式: 2 用于马达 (开式、闭式系统) Used as pump or motor in open or closed circuits

2-侧面法兰油口 SAE flange ports, at opposite side

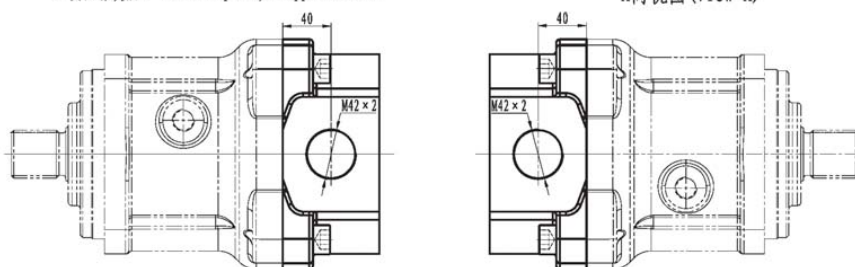
A向视图 (view A)



通油盘型式: 3 用于马达 (开式、闭式系统) Used as motor in open or closed circuits

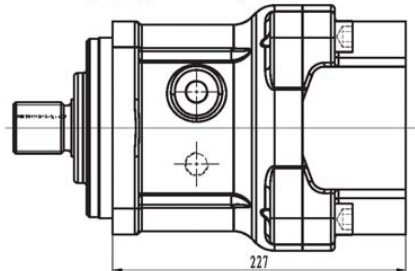
3-侧面螺纹油口 Threaded ports, at opposite side

A向视图 (view A)

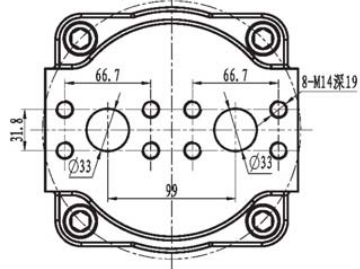


通油盘型式: 4 用于马达 (开式、闭式系统) Used as motor in open or closed circuits

4-端面法兰油口 SAE flange ports, rear

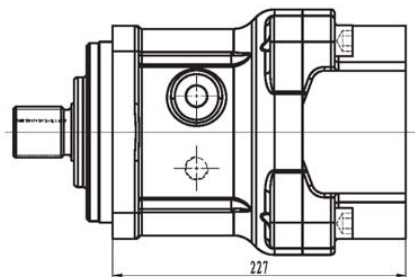


B向视图 (View B)

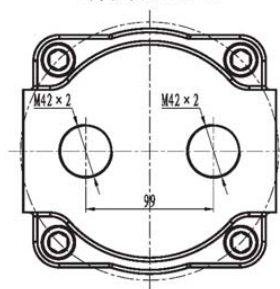


通油盘型式: 5 用于马达 (开式、闭式系统) Used as motor in open or closed circuits

5-端面螺纹油口 Threaded ports, rear



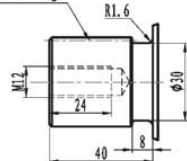
B向视图 (View B)



轴伸结构 Shaft end

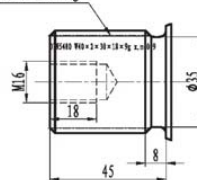
I型花键 (spline)

花键DIN5480: W35 × 2 × 16 × 9g



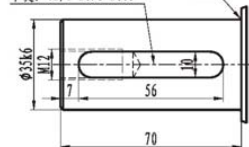
II型花键 (spline)

花键DIN5480: W40 × 2 × 18 × 9g



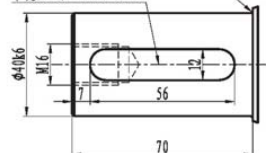
I型平键 (parallel key)

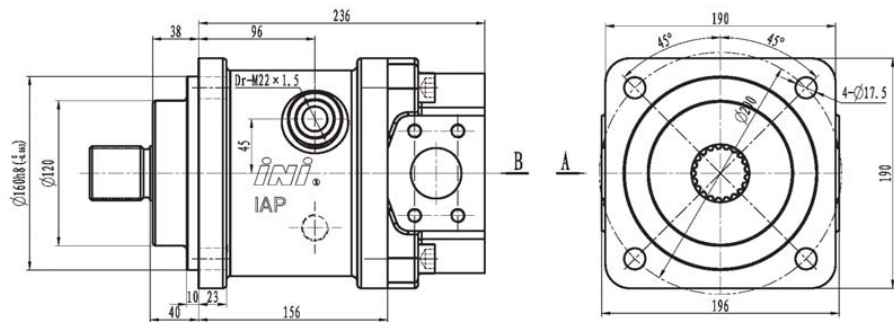
平键: GB/T 1096-2003



II型平键 (parallel key)

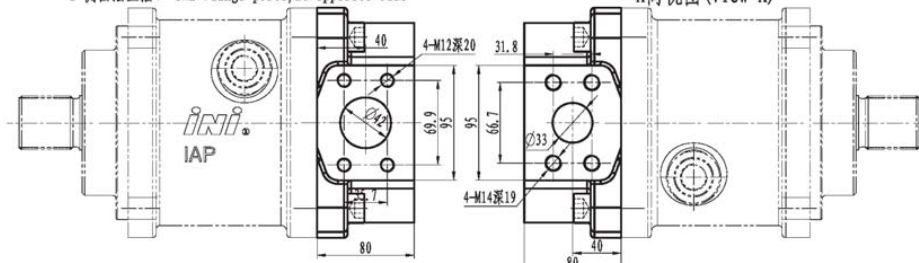
平键: GB/T 1096-2003





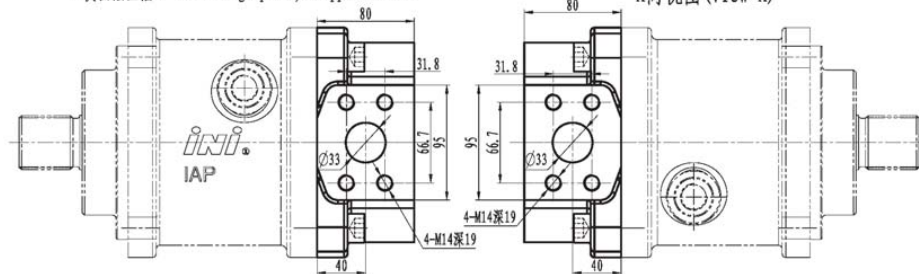
通油盘型式: 1 用于泵 (开式系统) Used as pump in open circuits

1-侧面法兰油口 SAE flange ports, at opposite side



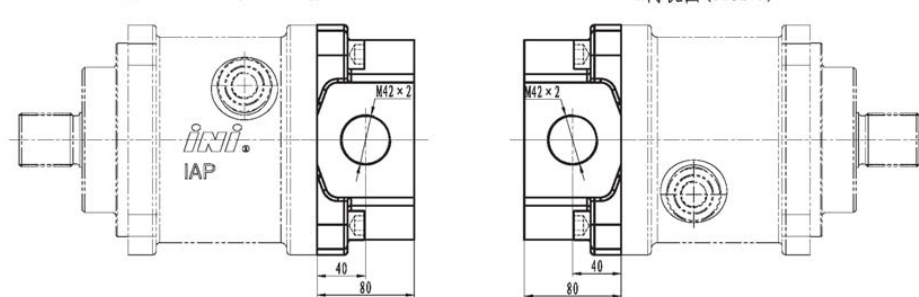
通油盘型式: 2 用于马达 (开式、闭式系统) Used as pump or motor in open or closed circuits

2-侧面法兰油口 SAE flange ports, at opposite side



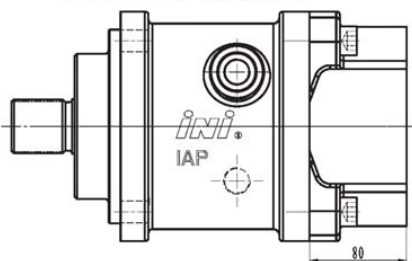
通油盘型式: 3 用于马达 (开式、闭式系统) Used as motor in open or closed circuits

3-侧面螺纹油口 Threaded ports, at opposite side

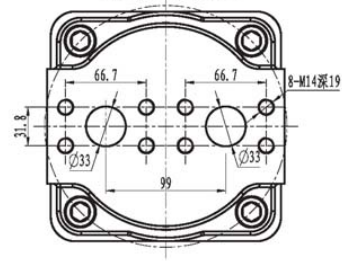


通油盘型式: 4 用于马达 (开式、闭式系统) Used as motor in open or closed circuits

4-端面法兰油口 SAE flange ports, rear

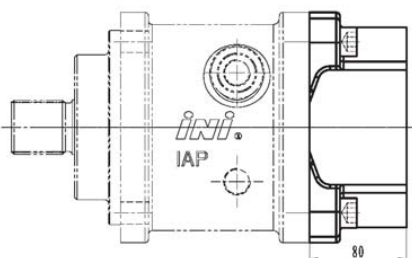


B向视图 (View B)

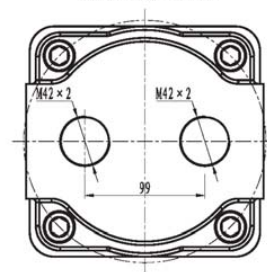


通油盘型式: 5 用于马达 (开式、闭式系统) Used as motor in open or closed circuits

5-端面螺纹油口 Threaded ports, rear



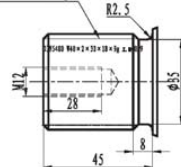
B向视图 (View B)



轴伸结构 Shaft end

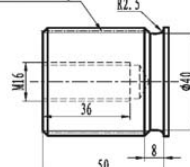
I型花键 (spline)

花键 DIN5480: W40 x 2 x 18 x 9g



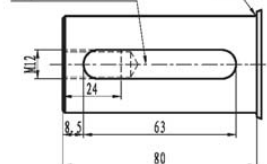
II型花键 (spline)

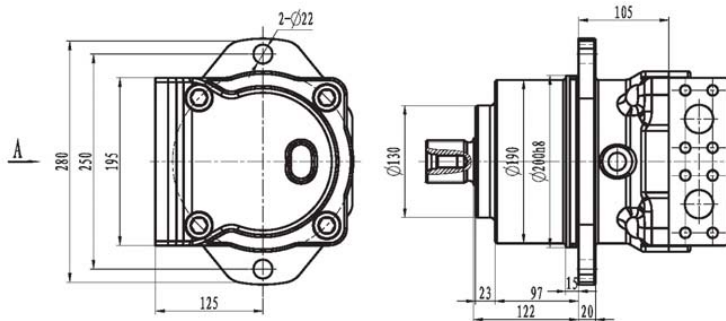
花键 DIN5480: W45 x 2 x 21 x 9g



I型平键 (parallel key)

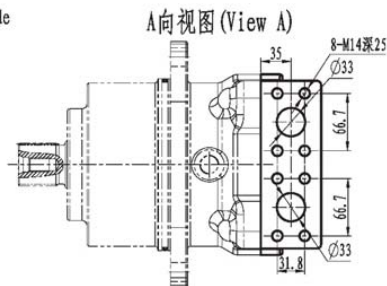
平键: GB/T 1096-2003





通油盘型式: 1 用于泵、马达 (开式、闭式系统) Used as pump or motor in open or closed circuits

1-侧面法兰油口 SAE flange ports, at opposite side

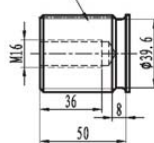


轴伸结构 Shaft end

I型花键 (Spline)

II型花键 (Spline)

花键DIN5480: W45 $\times 2 \times 21 \times 9g$



花键DIN5480: W50 $\times 2 \times 24 \times 9g$

