

IAP Series Pump

1. Brief Introduction

IAP series pump are swash plate type axial piston pump, and their displacement are fixed . IAP series pump are designed on the basis of our profound knowledge and long experience , and manufactured under the strict quality control system , thus ensuring IAP series has high efficiency and high reliability .

2. Features

IAP series pump have features as follows:

1 . High Power Density

By adopting a fixed swash plate , a lighter and more compact machine with higher pressure rating and increased power density was obtained . The pump can tandem arrangement a gear pump , has an increased transmission efficiency , and is lighter.

2 .High Efficiency and Large Self-Priming Capability

The spherical valve plate and improved hydraulic balance provide stable cylinder rotation, thus achieving high efficiency even in a low pressure and low speed operating range.

3. Long Life

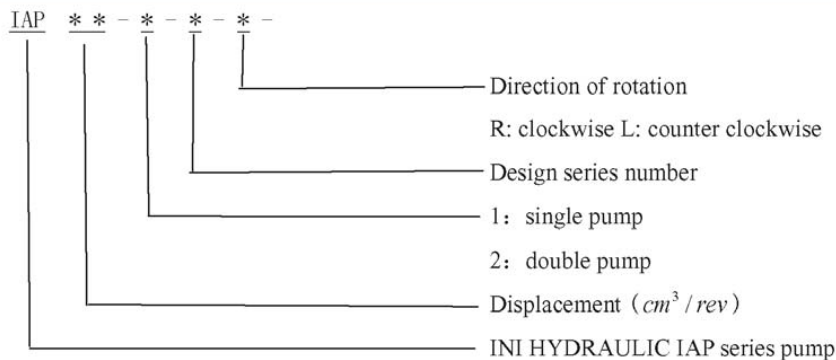
A long life is obtained by adopting main bearings of large capacity and the piston return mechanism that compensates for the wear of the shoes.

4. Low Noise

Even less noise has been achieved because of the optimum design of the valve plate and the casing rigidity.

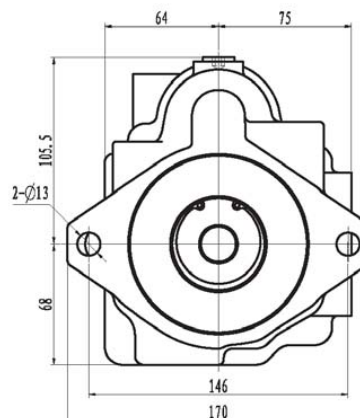
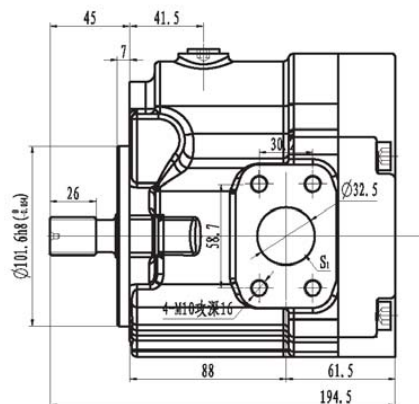
IAP series pump has optimum function design and is provided with further improved power density , efficiency, and reliability, based upon our long and rich experience, meeting the present day requirements . IAP series pump are utilized world-wide to provide the power source for hydraulic excavators , cranes , construction machines , car carrier and many other special purpose vehicles.

3. Model Options

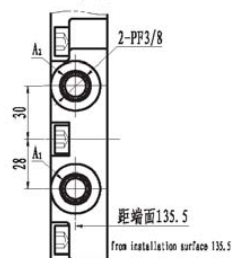


外形尺寸

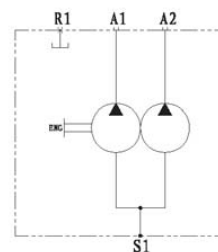
Dimensions



出口尺寸 delivery port



液压原理图 Hydraulic Principle



外花键输入参数

Dimensions of shaft end

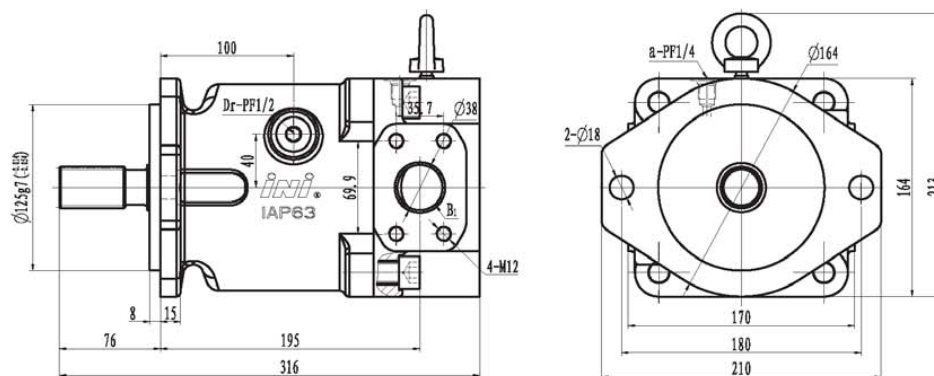
型号 type	齿数 no. of teeth	径节 diametral pitch	压力角 pressure angle	齿顶圆直径 major diameter	齿根圆直径 base diameter	跨棒距 min measurement over two pins	量棒直径 pin diameter	花键标准 involute spline rule
IAP10-2	13	16/32	30°	$\phi 21.8^{+0.13}_{-0.11}$	$\phi 18.16^{+0.11}_{-0.11}$	24.94	3.048	ANSI B92.1-1970

主要性能参数

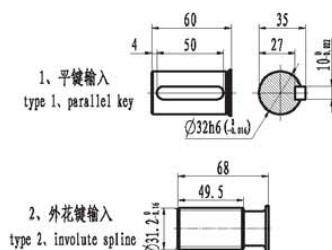
Main Specifications

型号 pump size	排量 (mL/r) displacement	压力 pressure (MPa)		转速 speed (r/min)		转向 direction of rotation 从轴端看逆时针 counter clockwise (viewed from shaft end)	适用机重 (Ton) Applicable Vehicle Mass (Ton)
		额定 rated	最高 peak	额定 rated	最高 peak		
IAP10-2	2x10	20	23	2300	2500	L	2

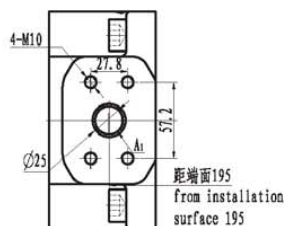
外形尺寸
Dimension



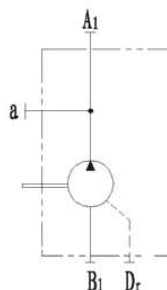
输入型式
Type of shaft end



出油口尺寸
delivery port



液压原理图
Hydraulic Principle



渐开线外花键输入参数

Dimensions of involute spline shaft end

型号 type	齿数 no. of teeth	径节 diametral pitch	压力角 pressure angle	齿顶圆直径 major diameter	齿根圆直径 base diameter	跨棒距 min measurement over two pins	量棒直径 pin diameter	花键标准 involute spline rule
IAP63-1	14	12/24	30°	$\phi 31.2^{+0.0}_{-0.16}$	$\phi 27.9^{+0.0}_{-0.16}$	34.406	3.6	ANSI B92.1-1970

主要性能参数

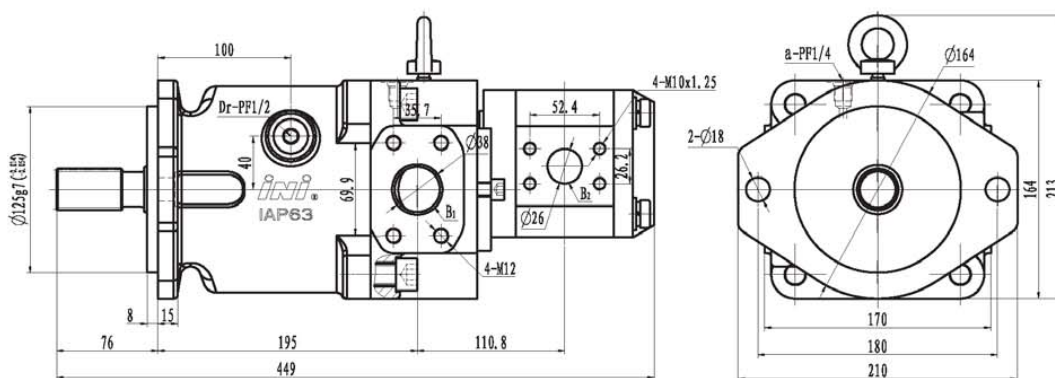
Main Specifications

型 号 pump size	排量 (mL/r) displacement	压 力 pressure (MPa)		最高转速 peak speed (r/min)		转 向 direction of rotation	适用机重 (Ton) applicable Vehicle Mass (Ton)
		额 定 rated	最 高 peak	当吸最高 max self priming	最 高 peak		
IAP63-1	32	31.4	34.3	2650	3250	从轴端看顺时针 (或逆时针) clockwise or counter clockwise (viewed from shaft's end)	2.5 ~ 12
	40、45						
	50						
	63						

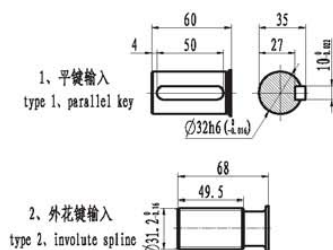
注：主泵排量可根据用户需求设定。

NTOE: main pump displacement can be made according to customer's need.

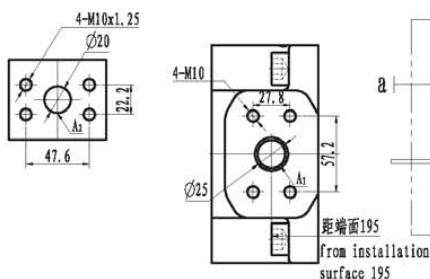
外形尺寸
Dimension



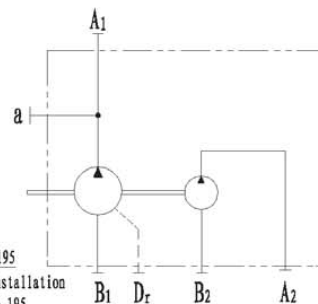
输入型式
Type of shaft end



出油口尺寸
delivery port



液压原理图
Hydraulic Principle



渐开线外花键输入参数

Dimensions of involute spline shaft end

型号 type	齿数 no. of teeth	径节 diametral pitch	压力角 pressure angle	齿顶圆直径 major diameter	齿根圆直径 base diameter	跨棒距 min measurement over two pins	量棒直径 pin diameter	花键标准 involute spline rule
IAP63-1	14	12/24	30°	$\phi 31.2_{-0.16}^{+0}$	$\phi 27_{-0.16}^{+0}$	34.406	3.6	ANSI B92.1-1970

主要性能参数

Main Specifications

型号	排量 (mL/r)	压力 pressure (MPa)	最高转速 peak speed (r/min)	辅助泵排量 (mL/r)	辅助泵压力 (MPa)	辅助泵转速 (r/min)	转向	适用机重 (Ton)
pump size	displacement	额定 rated 最高 peak	额定 rated 最高 peak	gear pump displacement	额定 rated 最高 peak	额定 rated 最低 min 最高 peak	direction of rotation	Applicable Vehicle Mass (Ton)
IAP63-1	32 40、45 50 63	31.4	34.3	2650	3250	20 25 400 2500 3000	从动轴有标识时(位逆时针) clockwise or counter clockwise (viewed from shaft end)	2.5~12

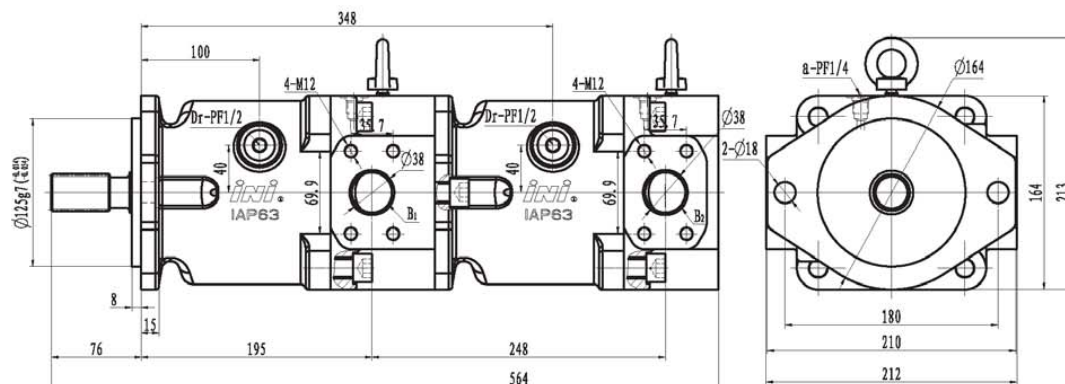
注: (1)主泵排量可根据用户需求设定。

(2) 配套齿轮泵可根据用户需求做出更改。

NTOE: (1)main pump displacement can be made according to customer's need.

(2) gear pump style can be change according to customer's need.

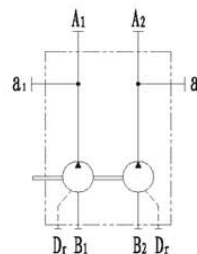
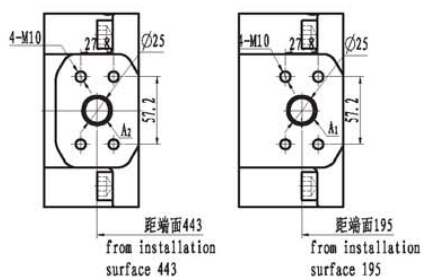
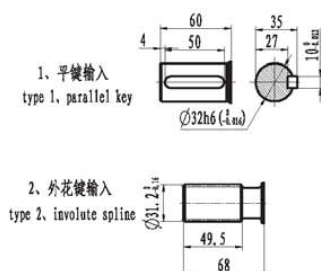
外形尺寸
Dimension



输入型式
Type of shaft end

出油口尺寸
delivery port

液压原理图
Hydraulic Principle



渐开线外花键输入参数

Dimensions of involute spline shaft end

型号 type	齿数 no. of teeth	径节 diametral pitch	压力角 pressure angle	齿顶圆直径 major diameter	齿根圆直径 base diameter	跨棒距 min measurement over two pins	量棒直径 pin diameter	花键标准 involute spline rule
IAP63-2	14	12/24	30°	$\phi 31.2^{+0.16}_{-0.16}$	$\phi 27^{+0.16}_{-0.16}$	34.406	3.6	ANSI B92.1-1970

主要性能参数

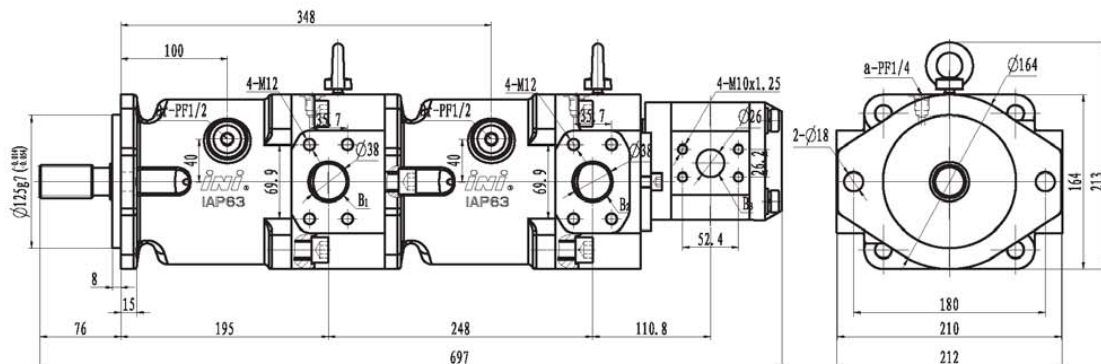
Main Specifications

型 号 pump size	排 量 (mL/r) displacement	压 力 pressure (MPa)		最高转速 peak speed (r/min)		转 向 direction of rotation	适用机重 (Ton) Applicable Vehicle Mass (T)
		额 定 rated	最 高 peak	最低转速 min speed	最 高 peak		
IAP63-2	2x32	31.4	34.3	2650	3250	从轴端看顺时针 (逆时针) clockwise or counter clockwise	2.5 ~ 12
	2x40、2x45						
	2x50						
	2x63						

注：主泵排量可根据用户需求设定。

NTOE: main pump displacement can be made according to customer's need.

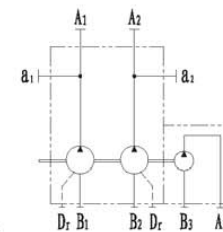
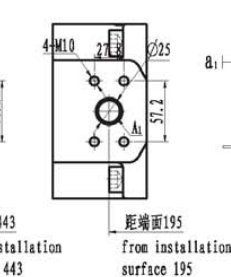
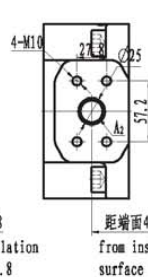
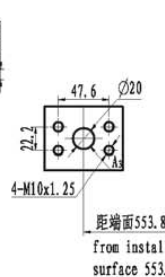
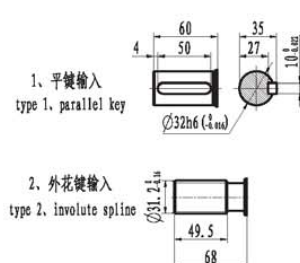
外形尺寸
Dimension



输入型式
Type of shaft end

出油口尺寸
delivery port

液压原理图
Hydraulic Principle



渐开线外花键输入参数

Dimensions of involute spline shaft end

型号 type	齿数 no. of teeth	径节 diametral pitch	压力角 pressure angle	齿顶圆直径 major diameter	齿根圆直径 base diameter	跨棒距 min measurement over two pins	量棒直径 pin diameter	花键标准 involute spline rule
IAP63-2	14	12/24	30°	Ø31.2 ^{+0.16} _{-0.16}	Ø27 ^{+0.16} _{-0.16}	34.406	3.6	ANSI B92.1-1970

主要性能参数

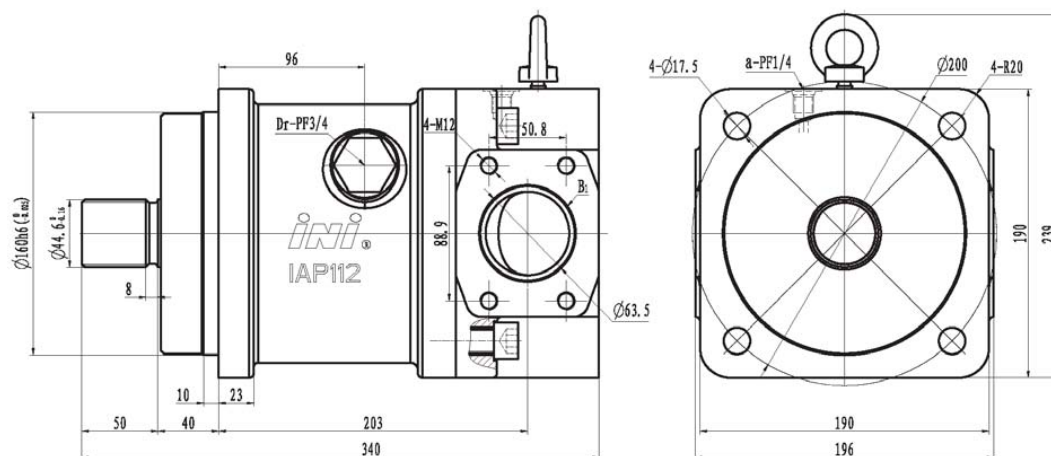
Main Specifications

型号	排量 (mL/r)	压力 pressure (MPa)	最高转速 peak speed (r/min)		辅助泵排量 (mL/r)	辅助泵压力 (MPa)		辅助泵转速 (r/min)		转 向	适用机重 (Ton)	
pump size	displacement	额定 rated	最高 peak	最高 peak	gear pump displacement	额定 rated	最高 peak	最低 min	额定 rated	最高 peak	direction of rotation	Applicable Vehicle Mass (Ton)
IAP63-2	2x63	31.4	34.3	2650	3250	20	25	400	2500	3000	从驱动轴端看 (顺时针)	2.5 ~ 12
											10、12.5、14	
											16、19.2、20 23、25、26.5 30、32	
从输入轴端看 (逆时针) clockwise or counter clockwise (viewed from shaft end)												

注: (1) 主泵排量可根据用户需求设定。
(2) 配套齿轮泵可根据用户需求做出更改。

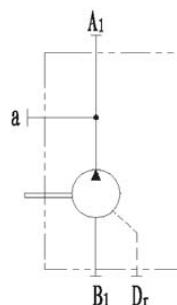
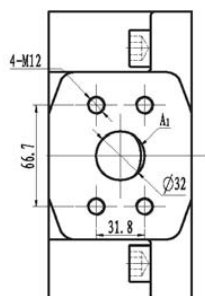
NOTE: (1) main pump displacement can be made according to customer's need.
(2) gear pump style can be change according to customer's need.

外形尺寸
Dimension



主泵出油口尺寸
main pump delivery port

液压原理图
Hydraulic Principle



外花键输入参数
Dimensions of shaft end

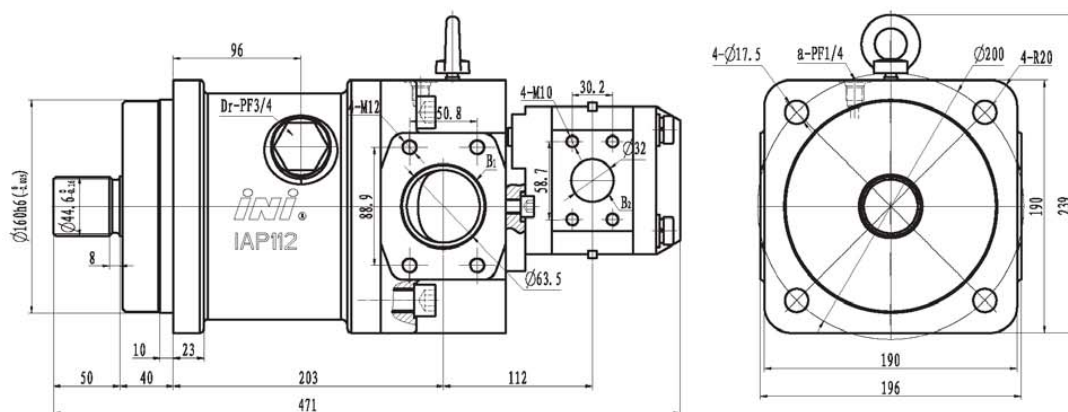
型号 type	齿数 no. of teeth	模数 module	压力角 pressure angle	齿顶圆直径 major diameter	齿根圆直径 minor diameter	公法线长度 base tangent length	跨测齿数 Number of teeth spanned for base tangent length	花键标准 involute spline rule
IAP112-1	21	2	30°	Ø44.6 ^{+0.16} _{-0.16}	Ø40.6 ^{+0.03} _{-0.03}	21.4	4	DIN 5480

主要性能参数
Main Specifications

型号 pump size	排量 (mL/r) displacement	压力 pressure (MPa)		最高转速 peak speed (r/min)		转向 direction of rotation 从轴端看顺时针 (或逆时针) clockwise or counter clockwise (viewed from shaft end)	适用机重 (Ton) Applicable Vehicle Mass (Ton)
		额定 rated	最高 peak	空载最高 max. self priming	最高 peak		
IAP112-1	70、80、90 100、112、120	31.4	34.3	2360	2700		10~25

注：主泵排量可根据用户需求设定。NT08: main pump displacement can be made according to customer's need.

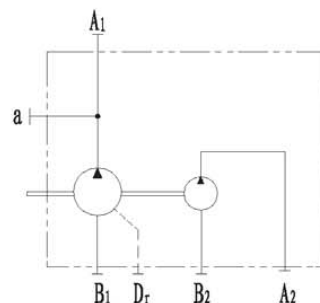
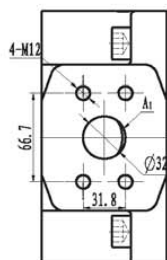
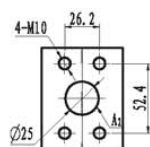
外形尺寸 Dimension



辅泵出油口尺寸
gear pump delivery port

主泵出油口尺寸
main pump delivery port

液压原理图
Hydraulic Principle



外花键输入参数
Dimensions of shaft end

型号 type	齿数 no. of teeth	模数 module	压力角 pressure angle	齿顶圆直径 major diameter	齿根圆直径 minor diameter	公法线长度 base tangent length	跨测齿数 Number of teeth spanned for base tangent length	花键标准 involute spline rule
IAP112-1	21	2	30°	Ø44.6 ^{+0.14} _{-0.10}	Ø40.6 ^{+0.03} _{-0.03}	21.4	4	DIN 5480

主要性能参数
Main Specifications

型号 pump size	排量 (mL/r) displacement	压力 pressure (MPa) 额定 rated 最高 peak	最高转速 peak speed (r/min) 额定 rated 最高 peak	辅助泵排量 (mL/r) gear pump displacement	辅助泵压力 (MPa) 额定 rated 最高 peak	辅助泵转速 (r/min) gear pump speed 最低 min 额定 rated 最高 peak	转向 direction of rotation 从轴端看顺时针 (泵进油时) clockwise or counter clockwise (viewed from shaft end)	适用机重 (Ton) Applicable Vehicle Mass (Ton)
IAP112-1	70	31.4	34.3	2360	2700	27		10~25
	80					32		
	90					36		
	100					40		
	112 (120)					44		

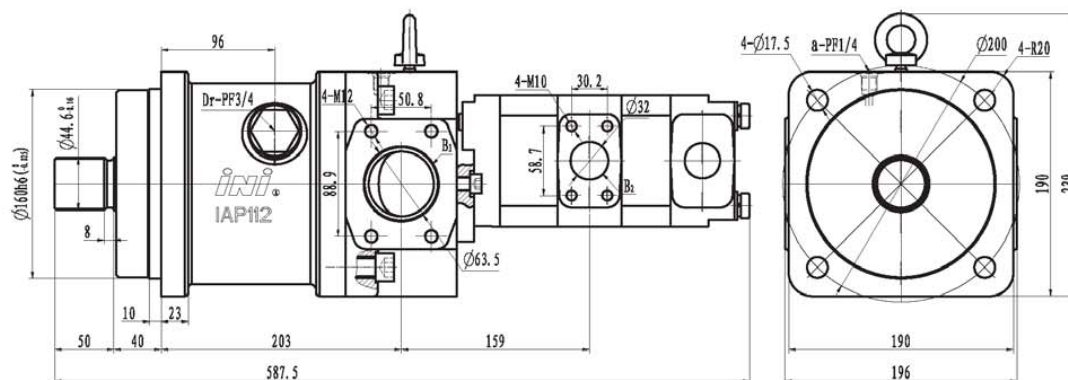
注: (1) 主泵排量可根据用户需求设定。

(2) 配套齿轮泵可根据用户需求做出更改。

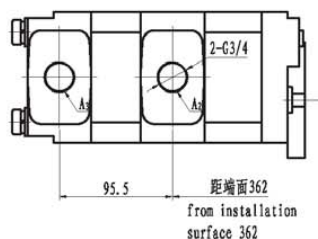
NOTE: (1) main pump displacement can be made according to customer's need.

(2) gear pump style can be change according to customer's need.

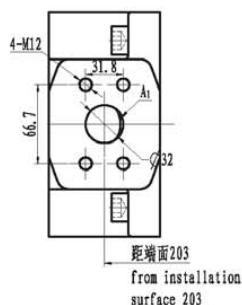
外形尺寸 Dimension



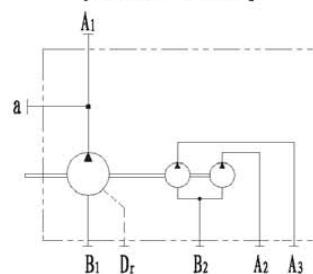
辅泵出口口尺寸
gear pump delivery port



主泵出口口尺寸
main pump delivery port



液压原理图
Hydraulic Principle



外花键输入参数
Dimensions of shaft end

型号 type	齿数 no. of teeth	模数 module	压力角 pressure angle	齿顶圆直径 major diameter	齿根圆直径 minor diameter	公法线长度 base tangent length	跨测齿数 Number of teeth spanned for base tangent length	花键标准 involute spline rule
IAP112-1	21	2	30°	$\phi 44.6_{-0.16}^{+0.10}$	$\phi 40.6_{-0.83}^{+0.10}$	21.4	4	DIN 5480

主要性能参数
Main Specifications

型号 pump size	排量 (mL/r) displacement	压力 pressure (MPa) 额定 rated 最高 peak	最高转速 peak speed (r/min) 额定 rated 最高 peak	辅泵排量 (mL/r) gear pump displacement 前 front 后 rear	辅泵压力 (MPa) gear pump pressure 额定 rated 最高 peak	辅泵转速 (r/min) gear pump speed 最低 min 额定 rated 最高 peak	转向 direction of rotation 从轴端看顺时针 (从定时标) clockwise or counter clockwise (viewed from shaft end)	适用机重 (Ton) Applicable Vehicle Mass (Ton)
IAP112-1	70 80 90 100 112 (120)	31.4 34.3	2360 2700	32 32 40 40	25 28	600 2000 2500		10~25

注: (1) 主泵排量可根据用户需求设定。

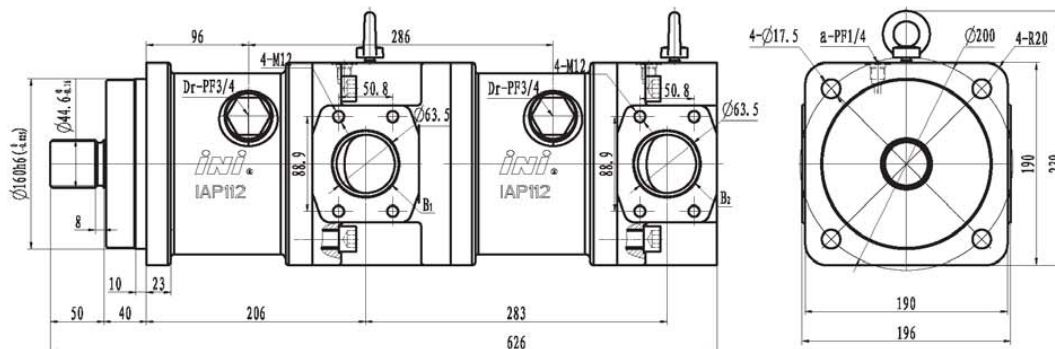
(2) 配套齿轮泵可根据用户需求做出更改。

NOTE: (1) main pump displacement can be made according to customer's need.

(2) gear pump style can be change according to customer's need.

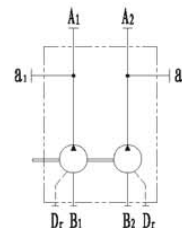
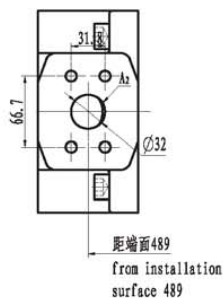
外形尺寸

Dimension



主泵出油口尺寸
main pump delivery port

液压原理图
Hydraulic Principle



外花键输入参数
Dimensions of shaft end

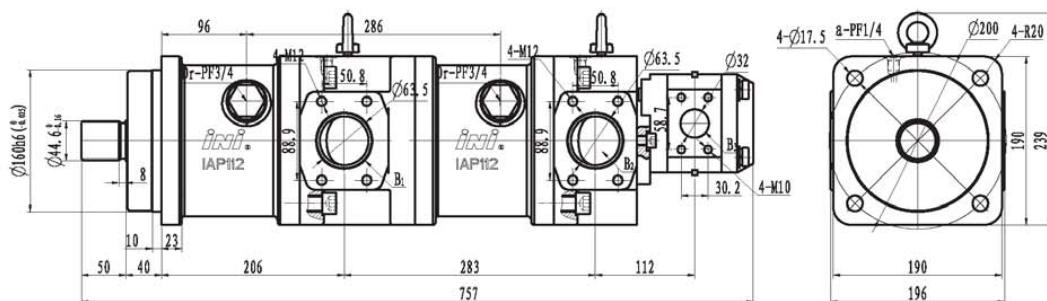
型号 type	齿数 no. of teeth	模数 module	压力角 pressure angle	齿顶圆直径 major diameter	齿根圆直径 minor diameter	公法线长度 base tangent length	跨测齿数 Number of teeth spanned for base tangent length	花键标准 involute spline rule
IAP112-2	21	2	30°	Ø44.6 ^{+0.16} _{-0.16}	Ø40.6 ^{+0.03} _{-0.03}	21.4	4	DIN 5480

主要性能参数
Main Specifications

型号 pump size	排量 (mL/r) displacement	压力 pressure (MPa)		最高转速 peak speed (r/min)		转向 direction of rotation	适用机重 (Ton) Applicable Vehicle Mass (Ton)
		额定 rated	最高 peak	自吸最高 max self priming	最高 peak		
IAP112-2	2x70	31.4	34.3	2360	2700	从轴端看顺时针 (或逆时针) clockwise or counter clockwise (viewed from shaft end)	10~25
	2x80						
	2x90						
	2x100						
	2x112 (2x120)						

注：主泵排量可根据用户需求设定。NTOE: main pump displacement can be made according to customer's need.

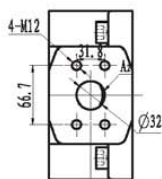
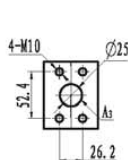
外形尺寸 Dimension



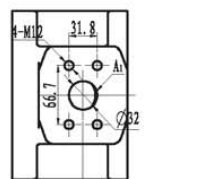
辅泵出油口尺寸
gear pump delivery port

主泵出油口尺寸
main pump delivery port

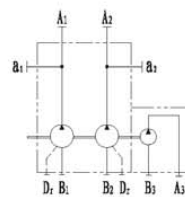
液压原理图
Hydraulic Principle



距端面489
from installation
surface 489



距端面206
from installation
surface 206



外花键输入参数
Dimensions of shaft end

型号 type	齿数 no. of teeth	模数 module	压力角 pressure angle	齿顶圆直径 major diameter	齿根圆直径 minor diameter	公法线长度 base tangent length	跨测齿数 Number of teeth spanned for base tangent length	花键标准 involute spline rule
IAP112-2	21	2	30°	Ø44.6 ^{+0.16} _{-0.16}	Ø40.6 ^{+0.03} _{-0.03}	21.4	4	DIN 5480

主要性能参数
Main Specifications

型号 pump size	排量 (mL/r) displacement	压力 pressure (MPa) 额定 rated 最高 peak	最高转速 peak speed (r/min) 额定 rated 最高 peak	辅助泵排量 (mL/r) gear pump displacement	辅助泵压力 (MPa) gear pump pressure	辅助泵转速 (r/min) gear pump speed	转向 direction of rotation	适用机重 (Ton) Applicable Vehicle Mass (Ton)
IAP112-2	2x70	31.4	34.3	2360	2700	27	从轴端看顺时针 (从逆时针) clockwise or counter clockwise (viewed from shaft end)	10~25
	2x80					32		
	2x90					36		
	2x100					40		
	2x112 (2x120)					44		
						25		
						30		
						400		
						2500		
						3000		

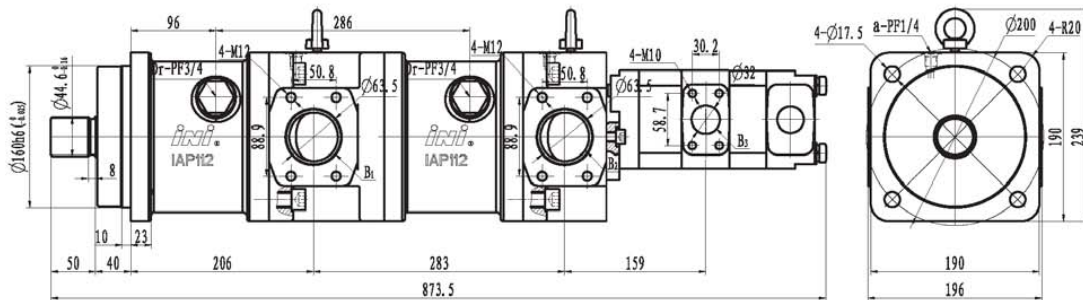
注: (1) 主泵排量可根据用户需求设定。

NT0E: (1) main pump displacement can be made according to customer's need.

(2) 配套齿轮泵可根据用户需求做出更改。

(2) gear pump style can be change according to customer's need.

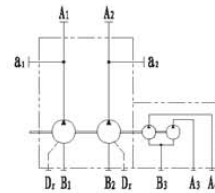
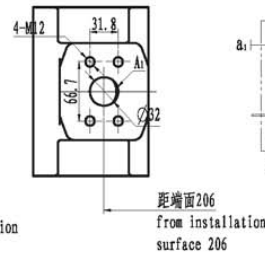
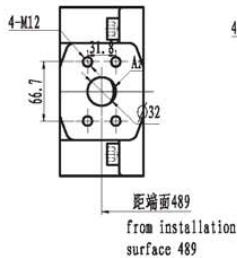
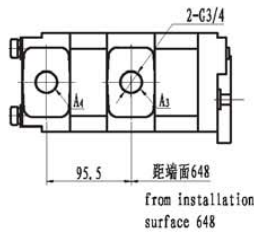
外形尺寸
Dimension



辅泵出口尺寸
gear pump delivery port

主泵出口尺寸
main pump delivery port

液压原理图
Hydraulic Principle



外花键输入参数
Dimensions of shaft end

型号 type	齿数 no. of teeth	模数 module	压力角 pressure angle	齿顶圆直径 major diameter	齿根圆直径 minor diameter	公法线长度 base tangent length	跨测齿数 Number of teeth spanned for base tangent length	花键标准 involute spline rule
IAP112-2	21	2	30°	$\phi 44.6^{+0.16}_{-0.16}$	$\phi 40.6^{+0.03}_{-0.03}$	21.4	4	DIN 5480

主要性能参数
Main Specifications

型号 pump size	排量 (mL/r) displacement	压力 pressure (MPa)		最高转速 peak speed (r/min)		辅助泵排量 (mL/r) gear pump displacement		辅助泵压力 (MPa) gear pump pressure		辅助泵转速 (r/min) gear pump speed		转向 direction of rotation	适用机重 (Ton) Applicable Vehicle Mass (Ton)
		额定 rated	最高 peak	额定 rated	最高 peak	前置 front	后置 rear	额定 rated	最高 peak	最低 min	额定 rated	最高 peak	
IAP112-2	2x70	31.4	34.3	2360	2700	32	25	25	28	600	2000	从轴端看顺时针 (或逆时针) clockwise or counter clockwise (viewed from shaft end)	10~25
	2x80					32	32						
	2x90					40	20						
	2x100					40	32						
	2x112 (2x120)					40	32						

注: (1)主泵排量可根据用户需求设定。

(2)配套齿轮泵可根据用户需求做出更改。

NOTE: (1)main pump displacement can be made according to customer's need.

(2)gear pump style can be change according to customer's need.