

安全防范 Safety Precautions

为安全使用本产品，使用前请仔细阅读《操作说明》

For safe and proper use of the product, please read the instruction manual carefully before use.

因产品改进,本册子中的内容可能有所更新,恕不另行通知。

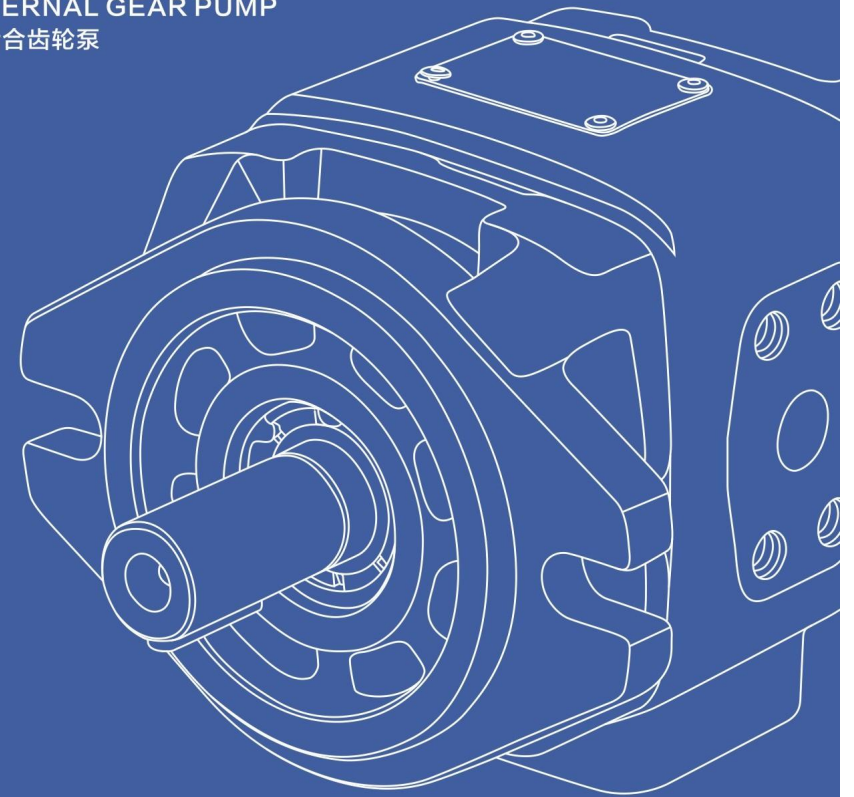
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MYASEK

专注液压传动 & 控制
FOCUS ON HYDRAULIC TRANSMISSION AND CONTROL

HYDRAULIC

INTERNAL GEAR PUMP 内啮合齿轮泵



MYASEK

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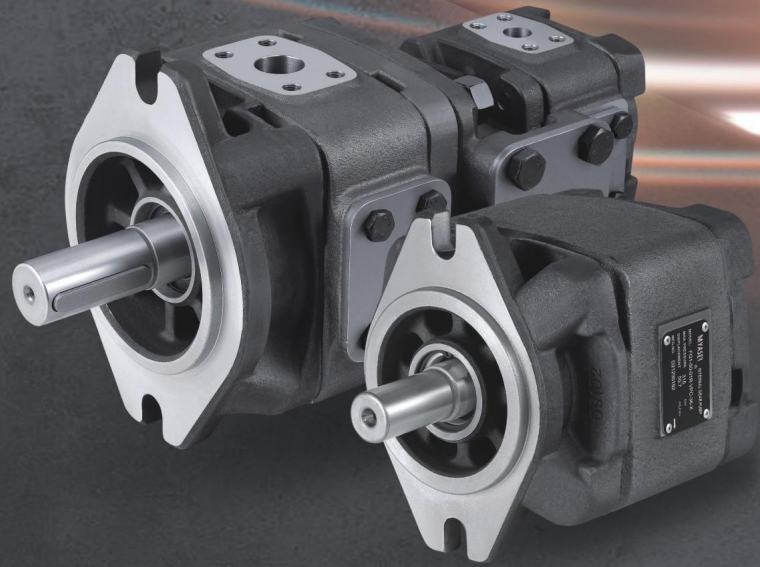
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宁波胜仕科技有限公司
NINGBO SHENGSHI TECHNOLOGY CO., LTD

Focus On Hydraulic
Transmission And Control
专注液压传动 & 控制

MYASEK 雅森科液壓

**MORE RELIABLE
ENERGY-SAVING AND QUIET
更可靠/更节能/更安靜**

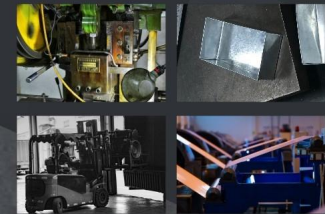


广泛应用于

塑料机械、钣金、冲床折弯机、
机床设备、叉车、液压站等

WIDELY USED IN

Plastic machinery, sheet metal, punch Press brake,
machine tool equipment, forklift, hydraulic station, etc



MYASEK HYDRAULIC ENTERPRISE CULTURE IDEA

雅森科 液压/企业文化理念

Value 企业价值观

服务至上，以人为本，科技创新，创造卓越
Service first, people-oriented, technological innovation,
and creating excellence

Vision 企业愿景

可持续发展，打造中国最具品牌价值、核心竞争力、
创造力的液压供应商企业
Sustainable development, building China's most valuable brand, core
competitiveness, and creative hydraulic supplier enterprise

Mission 企业使命

开发先进、环保的行业技术，长期为广大客户提供最有效的
解决方案，节约成本，提升效率，促进行业良性发展。
Develop advanced and environmentally friendly industry technologies, provide the
most effective solutions for customers in the long term, save costs, improve
efficiency, and promote the healthy development of the industry.

MYASEK 雅森科液壓

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FG系列双联泵 FG SERIES DOUBLE PUMP

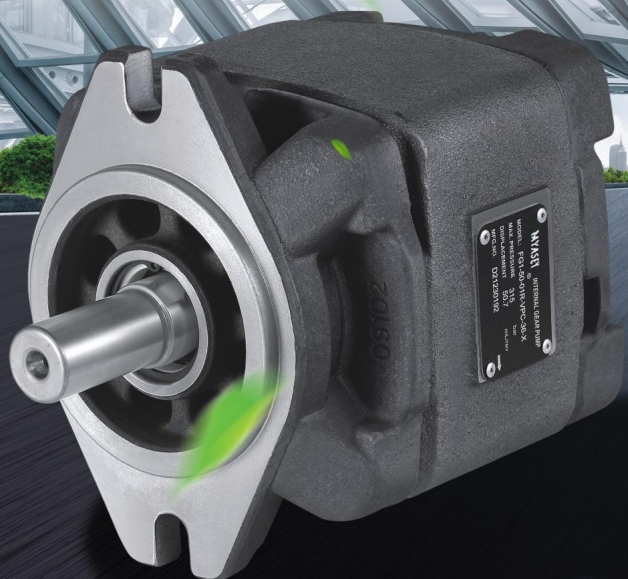
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使用注意事项 PRECAUTIONS FOR USE

FG SERIES SINGLE PUMP

FG系列单泵



专注液压传动 & 控制
FOCUS ON HYDRAULIC TRANSMISSION AND CONTROL

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特点 Features

FG系列齿轮泵是我公司新研发的一款应用于高压领域的高性能内啮合齿轮泵。

1. 可广泛适用于工业，如注塑机、油压机、锻压机、压铸机、冲床、折弯机、剪板机、鞋机以及橡胶加工、冶金、船舶、叉车等行业的液压系统，尤其适用于伺服变频驱动的节能系统。采用轴向和径向压力补偿设计，即使在低转速和低粘度下仍保持较高的容积效率。
2. 超低的噪音，采用高强度铸铁和内部独特的消音设计，使噪音更低。
3. 采用了特殊型齿轮及泵体，加强了齿轮及泵体的旋转精度和刚性。
4. 极低的流量和压力脉动，在低速状况仍可保持稳定的流量和压力输出。
5. 高压设计，最高使用压力可达35MPa。
6. 转速范围宽广，最高转速可达3000r/min。
7. 可进行组合形成双联泵。
8. 对油液污染不敏感，使用寿命长。

FG series gear pump is a new developed by our company for high pressure field of high performance internal gear pump.

1. It can be widely used in industries such as injection molding machines, hydraulic presses, forging machines, die-casting machines, punching machines, bending machines, shearing machines, shoe machines, as well as hydraulic systems in industries such as rubber processing, metallurgy, shipbuilding, forklifts, etc., especially in energy-saving systems driven by servo frequency conversion. Adopting axial and radial pressure compensation design, it maintains high volumetric efficiency even at low speeds and low viscosity.
2. Ultra low noise, using high-strength cast iron and unique internal noise reduction design, making the noise lower.
3. Special gear and pump body are adopted to strengthen the rotation accuracy and rigidity of gear and pump body.
4. Extremely low flow and pressure pulsation, stable flow and pressure output can still be maintained at low speeds.
5. High pressure design, with a maximum operating pressure of up to 35MPa.
6. Wide speed range, with a maximum speed of up to 3000r/min.
7. It can be combined to form a dual pump.
8. Not sensitive to oil pollution and has a long service life.

型号说明 Model Description

FG	1	-40	-01	R	-V	P	C	
							法兰安装形式 Flange installation form	
							SAE 2孔 SAE 2 hole	C
							轴伸形式 Shaft extension form	
							平键轴 Flat key shaft	P
							花键轴 Spline shaft	S
							密封形式 Sealed form	
							氟橡胶 Fluororubber	V
							旋转方向 (从轴端看) Rotation direction (viewed from the shaft end)	
							顺时针 Clockwise	R
							逆时针 Counterclockwise	L
							设计号 Design number	01
							规格 Specification	
							排量 (mL/r) Displacement (mL/r)	
							4 8 10 13 16 20 25 32 40 50 63	
							80 100 125 145 160	
							系列号 Serial Number	
							排量4...25 Displacement 4...25	0
							排量25...63 Displacement 25...63	1
							排量63...160 Displacement 63...160	2
							泵类型 Pump type	
							内啮合齿轮泵 Internal gear pump	FG

★注：逆时针旋转仅限于FG系列单泵

★Note: Counterclockwise rotation is limited to FG series single pump

FG SERIES INTERNAL GEAR PUMP

FG系列内啮合齿轮泵

机能, 剖面

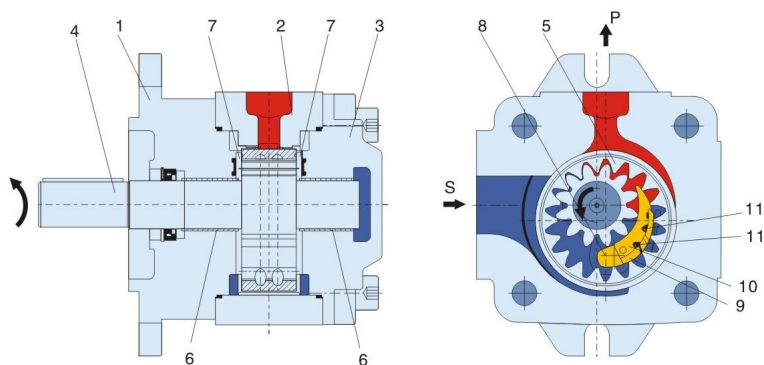
Function, profile

结构 Structure

FG系列液泵为具有固定排量的间隙补偿内啮合齿轮泵。

其基本构成是：前盖(1)，泵体(2)，后盖(3)，齿轮轴(4)，内齿圈(5)，滑动轴承(6)，前后侧板(7)和定位杆(8)，以及由月牙副板(9)，月牙主板(10)和塑料棒(11)组成的径向补偿功能

The FG series hydraulic pump is a backlash compensation internal gear pump with a fixed displacement. Its basic composition is: front cover (1), pump body (2), rear cover (3), gear shaft (4), ring gear (5), sliding bearing (6), front and rear side plates (7) and positioning Rod (8), and the radial compensation function composed of the crescent sub-plate (9), the crescent main plate (10) and the plastic rod (11)



吸油和排油过程 Oil suction and drainage process

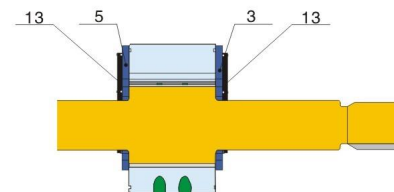
根据流体动力学安装的齿轮轴(4)按所示旋转方向转动内齿圈(5)。

通过在吸油区域中逐渐打开的齿侧间隙吸入油液。油液通过齿轮轴和内齿圈之间的齿侧间隙从吸油区域(S)输送到压力区域(P)。

然后径向补偿内齿圈, 油液从闭合的齿侧间隙排出并输送到压力油口(P)。吸油区域和排放区域由径向补偿元件(9、10、11)以及齿轮轴之间的齿轮啮合分隔开。

轴向补偿: 压力区域中的排放室由前后侧板(3)(5)进行轴向密封。

轴向密封圈背对排油区域的一侧受压力场(13)的背压。这些压力场使轴向密封圈与排油区域径向压力达到平衡, 从而以比较低的机械损失实现理想的密封效果。



Hydrodynamically mounted gear shaft (4) rotates the inner teeth in the direction of rotation shown Circle (5).

The oil is inhaled through the tooth side gap that gradually opens in the oil absorption area. Oil passage

The side clearance between the gear shaft and the inner gear ring transmits pressure from the oil absorption area (S) Region (P).

Then the inner gear ring is compensated radially, and the oil is discharged and transported through the closed clearance of the tooth side Pressure oil port (P). The oil absorption area and discharge area are provided by radial compensation elements (9, 10, 11) and gear shaft between the gear mesh separation.

Axial compensation: The discharge chamber in the pressure area is carried out by the front and rear side plates (3) (5) Axial seal.

Back pressure of the compression field (13) on the side of the axial seal facing the oil discharge area, this

These pressure fields balance the radial pressure between the axial sealing ring and the oil discharge area, thus Achieve the ideal sealing effect with relatively low mechanical loss.

径向补偿 Radial compensation

径向补偿元件包括月牙副板(9), 月牙主板(10)和塑料棒(11)

月牙副板(9)和月牙主板(10)排列在压力场中, 因此产生压力基本上由定位杆(8)承受。

一个小的压力将月牙副板和月牙主板压到齿轮轴和内齿圈的齿尖, 这样即可通过自动间隙调整将排油区域与吸油区域分隔开。

这是在整个工作时间内持续保持高容积效率的先决条件。

月牙副板和月牙主板的间隙调整可通过中间的塑料棒(11)来进行。

Radial compensation elements include crescent sub-plate (9), crescent motherboard (10) and plastic rod (11)

The crescent auxiliary plate (9) and the crescent main board (10) are arranged in the pressure field, so that the pressure generated is basically borne by the positioning rod (8).

A small pressure is applied to push the crescent auxiliary plate and the crescent motherboard to the tooth tips of the gear shaft and the inner gear ring, thus separating the oil discharge area from the oil suction area by automatic clearance adjustment.

This is a prerequisite for consistently maintaining high volumetric efficiency throughout the working time.

The clearance adjustment of the crescent sub-plate and the crescent motherboard can be carried out by means of a plastic rod (11) in the middle.

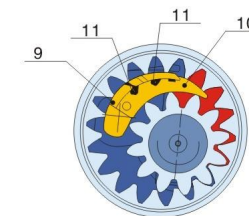
流体动力和流体静力安装 Hydrodynamic and Hydrostatic Installation

齿轮轴(4)由流体动力润滑的径向滑动轴承(6)承受。

内齿圈(5)以流体静力的方式安装在泵体(2)中。

The gear shaft (4) is supported by a hydrodynamic lubricated radial plain bearing (6).

The inner gear ring (5) is installed in the pump body (2) in a hydrostatic manner.



啮合 Engage

渐开线齿型的啮合具有用于较低流量和压力脉动的长啮合

长度的优点, 因此可确保低噪音进行。

Involute tooth type meshing has long meshing for lower flow and pressure pulsations

The length has the advantage of ensuring low noise.

FG SERIES INTERNAL GEAR PUMP

FG系列内啮合齿轮泵

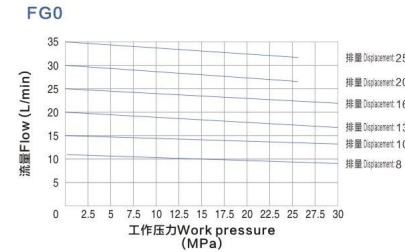
性能参数 Performance parameter

系列号 Serial Number	规格 Specification	排量 Displacement (mL/r)	工作压力Work pressure (Mpa)		转速范围Range of rotation (r/min)		重量 Weight (KG)
			额定 Rated	最高 Highest	最高 Highest	最低 lowest	
FG0	04	3.8	33	35	3000	600	4.9
	08	8.2	31.5	35	3000	600	4.6
	10	10.2	31.5	35	3000	600	4.8
	13	13.3	31.5	35	3000	600	4.9
	16	16.0	31.5	35	3000	600	5.2
	20	20.0	25	30	3000	600	5.6
	25	24.0	25	30	3000	600	6
FG1	25	25.3	31.5	35	3000	200	14.5
	32	32.7	31.5	35	3000	200	15
	40	40.1	31.5	35	3000	200	16
	50	50.7	31.5	35	3000	200	17
	63	63.7	25	30	3000	200	18.5
FG2	63	64.7	31.5	35	3000	200	42
	80	81.4	31.5	35	3000	200	43.5
	100	100.2	31.5	35	3000	200	43.5
	125	125.3	31.5	35	3000	200	48
	145	145.2	25	28	3000	200	50
	160	162.8	21	26	3000	200	52
FSG1 (高速型) (High-speed type)	25	25.3	31.5	35	3000	200	14.5
	32	32.7	31.5	35	3000	200	15
	40	40.1	31.5	35	3000	200	16
	50	50.7	31.5	35	3000	200	17
	63	63.7	31.5	35	3000	200	18.5
FSG2 (高速型) (High-speed type)	63	64.7	31.5	35	3000	200	42
	80	81.4	31.5	35	3000	200	43.5
	100	100.2	31.5	35	3000	200	43.5
	125	125.3	31.5	35	3000	200	48
	145	145.2	25	28	3000	200	50
	160	162.8	23	28	3000	200	52

专注液压传动 & 控制
FOCUS ON HYDRAULIC TRANSMISSION AND CONTROL

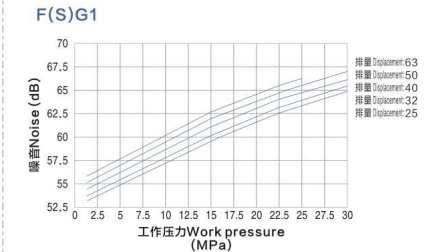
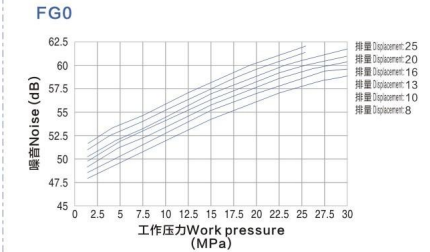
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特性曲线 Characteristic curve



流量压力特性:
测试条件: $n=1450\text{r/min}, v=46\text{mm}^3/\text{s}, t=50^\circ\text{C}$
Flow pressure characteristics:
Test conditions: $n=1450\text{r/min}, v=46\text{mm}^3/\text{s}, t=50^\circ\text{C}$

噪音曲线 Noise curve



测试条件: $n=1450\text{r/min}, v=46\text{mm}^3/\text{s}, t=50^\circ\text{C}$
传感器与泵距离=1m
Test conditions: $n=1450\text{r/min}, v=46\text{mm}^3/\text{s}, t=50^\circ\text{C}$,
distance between sensor and pump=1m

FG SERIES INTERNAL GEAR PUMP

FG系列内啮合齿轮泵

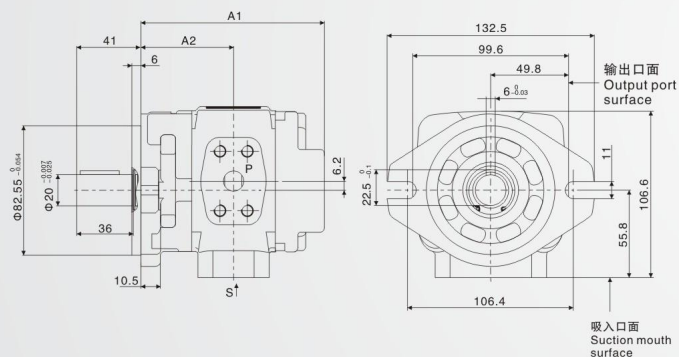
专注液压传动 & 控制
FOCUS ON HYDRAULIC TRANSMISSION AND CONTROL



FG0-※-01R-VPC (P型平键轴)

FG0-※-01R-VPC (P-type flat key shaft)

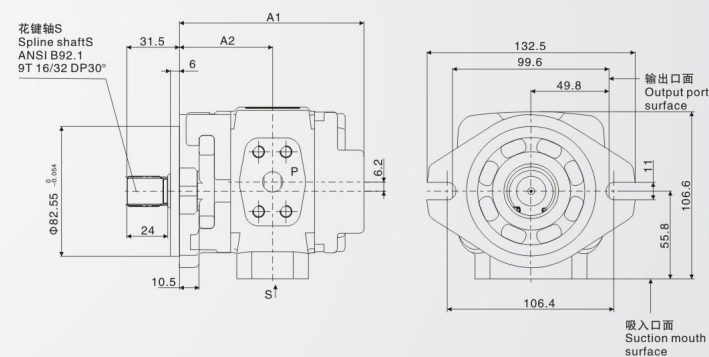
安装连接尺寸 Installation and connection size



FG0-※-01R-VSC (S型花键轴)

FG0-※-01R-VSC (S-type spline shaft)

安装连接尺寸 Installation and connection size



泵型号 Pump model	A1	A2	S	P
FG0-04-01R-VPC	113.5	55	Φ14	Φ14
FG0-08-01R-VPC	107	54	Φ19	Φ13
FG0-10-01R-VPC	111	56	Φ19	Φ13
FG0-13-01R-VPC	117.5	59.25	Φ19	Φ13
FG0-16-01R-VPC	123	62	Φ19	Φ13
FG0-20-01R-VPC	131	66	Φ26	Φ18
FG0-25-01R-VPC	139	70	Φ28	Φ19

●油口法兰连接尺寸见第13页 See page 13 for port flange connection dimensions

泵型号 Pump model	A1	A2	S	P
FG0-04-01R-VSC	113.5	55	Φ14	Φ14
FG0-08-01R-VSC	107	54	Φ19	Φ13
FG0-10-01R-VSC	111	56	Φ19	Φ13
FG0-13-01R-VSC	117.5	59.25	Φ19	Φ13
FG0-16-01R-VSC	123	62	Φ19	Φ13
FG0-20-01R-VSC	131	66	Φ26	Φ18
FG0-25-01R-VSC	139	70	Φ28	Φ19

●油口法兰连接尺寸见第13页 See page 13 for port flange connection dimensions

FG SERIES INTERNAL GEAR PUMP

FG系列内啮合齿轮泵

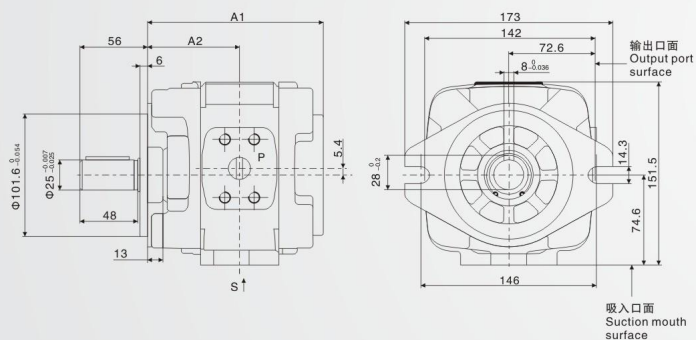
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FOCUS ON HYDRAULIC TRANSMISSION AND CONTROL



FG1-※-01R-VPC (P型平键轴)

FG1-※-01R-VPC (P-type flat key shaft)

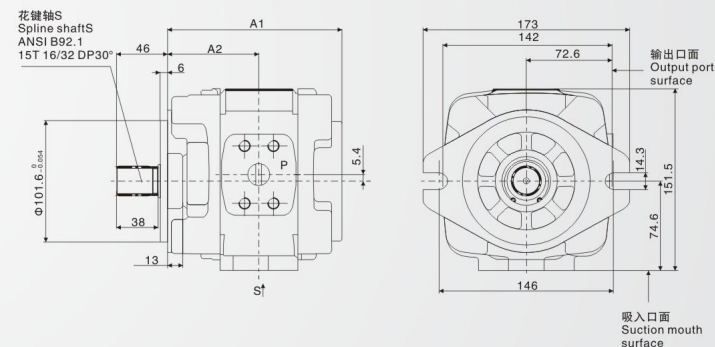
安装连接尺寸 Installation and connection size



FG1-※-01R-VSC (S型花键轴)

FG1-※-01R-VSC (S-type spline shaft)

安装连接尺寸 Installation and connection size



泵型号 Pump model	A1	A2	S	P
FG1-25-01R-VPC	139	73	Φ32	Φ18
FG1-32-01R-VPC	146	76.5	Φ32	Φ18
FG1-40-01R-VPC	153	80	Φ32	Φ20
FSG1-40-01R-VPC	153	80	Φ38.5	Φ20
FG1-50-01R-VPC	163	85	Φ32	Φ20
FSG1-50-01R-VPC	163	85	Φ51.5	Φ25
FG1-63-01R-VPC	177	92	Φ32	Φ20
FSG1-63-01R-VPC	177	92	Φ51.5	Φ25

●油口法兰连接尺寸见第13页 See page 13 for port flange connection dimensions

泵型号 Pump model	A1	A2	S	P
FG1-25-01R-VSC	139	73	Φ32	Φ18
FG1-32-01R-VSC	146	76.5	Φ32	Φ18
FG1-40-01R-VSC	153	80	Φ32	Φ20
FSG1-40-01R-VSC	153	80	Φ38.5	Φ20
FG1-50-01R-VSC	163	85	Φ32	Φ20
FSG1-50-01R-VSC	163	85	Φ51.5	Φ25
FG1-63-01R-VSC	177	92	Φ32	Φ20
FSG1-63-01R-VSC	177	92	Φ51.5	Φ25

●油口法兰连接尺寸见第13页 See page 13 for port flange connection dimensions

FG SERIES INTERNAL GEAR PUMP

FG系列内啮合齿轮泵

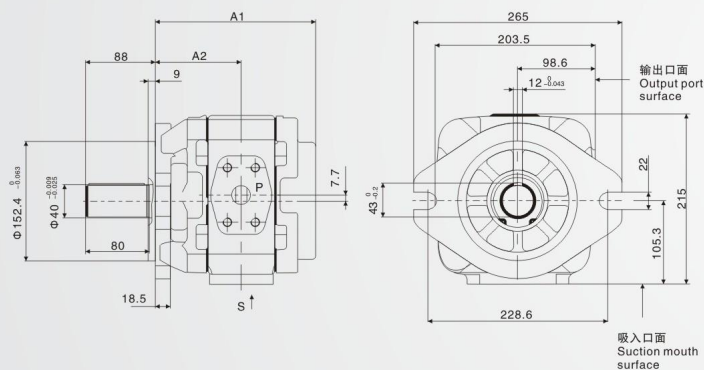
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FOCUS ON HYDRAULIC TRANSMISSION AND CONTROL



FG2-※-01※-VPC(P型平键轴)

FG2-※-01※-VPC (P-type flat key shaft)

安装连接尺寸 Installation and connection size

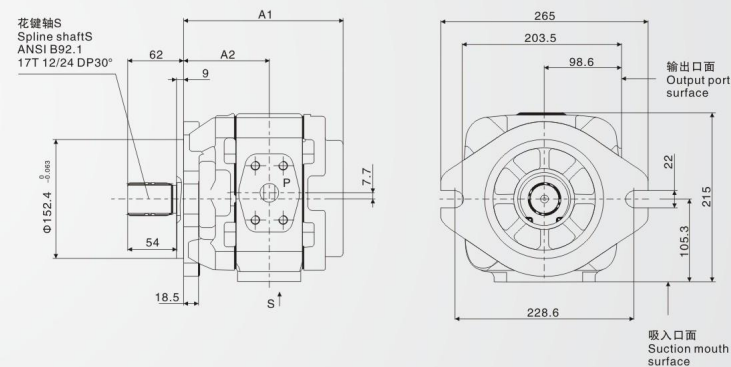


本图显示顺时针旋转泵；在逆时针旋转泵上，进油口位于对面！
This figure shows the pump rotating clockwise; on the pump rotating counterclockwise, the oil inlet is on the opposite side!

FG2-※-01※-VSC(S型花键轴)

FG2-※-01※-VSC (S-type spline shaft)

安装连接尺寸 Installation and connection size



本图显示顺时针旋转泵；在逆时针旋转泵上，进油口位于对面！
This figure shows the pump rotating clockwise; on the pump rotating counterclockwise, the oil inlet is on the opposite side!

泵型号 Pump model	A1	A2	S	P
FG2-63-01※-VPC	196	105.5	Φ40	Φ23
FG2-80-01※-VPC	204	109.5	Φ51	Φ32
FG2-100-01※-VPC	213	114	Φ51	Φ32
FSG2-100-01※-VPC	213	114	Φ64.5	Φ32
FG2-125-01※-VPC	225	120	Φ63.5	Φ38
FG2-145-01※-VPC	235.5	124.75	Φ63.5	Φ38
FSG2-145-01※-VPC	235.5	124.75	Φ76.5	Φ38
FG2-160-01※-VPC	243	129	Φ76	Φ38

●油口法兰连接尺寸见第13页 See page 13 for port flange connection dimensions

泵型号 Pump model	A1	A2	S	P
FG2-63-01※-VSC	196	105.5	Φ40	Φ23
FG2-80-01※-VSC	204	109.5	Φ51	Φ32
FG2-100-01※-VSC	213	114	Φ51	Φ32
FSG2-100-01※-VSC	213	114	Φ64.5	Φ32
FG2-125-01※-VSC	225	120	Φ63.5	Φ38
FG2-145-01※-VSC	235.5	124.75	Φ63.5	Φ38
FSG2-145-01※-VSC	235.5	124.75	Φ76.5	Φ38
FG2-160-01※-VSC	243	129	Φ76	Φ38

●油口法兰连接尺寸见第13页 See page 13 for port flange connection dimensions

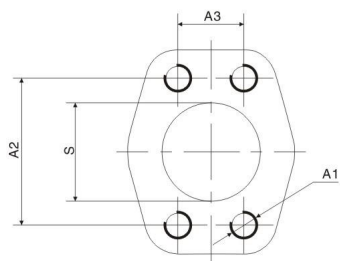
FG SERIES INTERNAL GEAR PUMP

FG系列内啮合齿轮泵

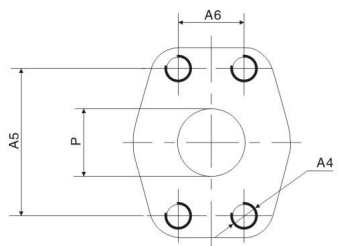
油口法兰连接尺寸

Port flange connection size

吸入口 “S” Suction port “S”



输出口 “P” Output port “P”



专注液压传动 & 控制
FOCUS ON HYDRAULIC TRANSMISSION AND CONTROL

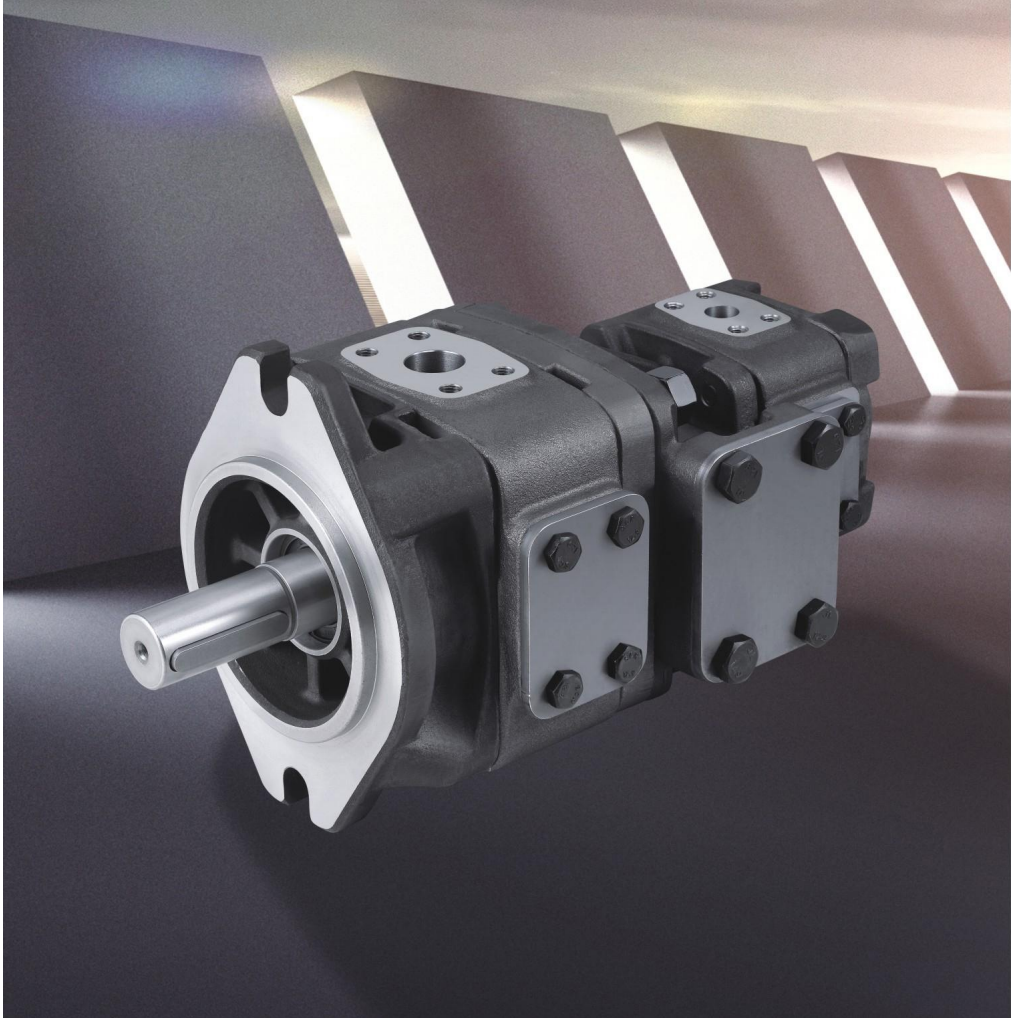
MYASEK 雅森科液壓

尺寸参数 Dimension parameters

系列 Series	规格 Specification	S	A1	A2	A3	P	A4	A5	A6
FG0	04	Φ14	M8深13	38.1	17.5	Φ14	M8深13	38.1	17.5
	08	Φ19	M10深15	47.6	22.2	Φ13	M8深13	38.1	17.5
	10	Φ19	M10深15	52.4	26.2	Φ13	M8深13	38.1	17.5
	13	Φ19	M10深15	52.4	26.2	Φ13	M8深13	38.1	17.5
	16	Φ19	M10深15	52.4	26.2	Φ13	M8深13	38.1	17.5
	20	Φ26	M10深15	58.7	30.2	Φ18	M10深15	47.6	22.2
FG1	25	Φ28	M10深15	58.7	30.2	Φ19	M10深15	47.6	22.2
	25	Φ32	M10深17	58.7	30.2	Φ18	M10深17	47.6	22.2
	32	Φ32	M10深17	58.7	30.2	Φ18	M10深17	47.6	22.2
	40	Φ32	M10深17	58.7	30.2	Φ20	M10深17	52.4	26.2
	50	Φ32	M10深17	58.7	30.2	Φ20	M10深17	52.4	26.2
FG2	63	Φ32	M10深17	58.7	30.2	Φ20	M10深17	52.4	26.2
	63	Φ40	M12深20	69.9	35.7	Φ23	M10深17	52.4	26.2
	80	Φ50	M12深20	77.8	42.9	Φ32	M12深20	69.9	35.7
	100	Φ50	M12深20	77.8	42.9	Φ32	M12深20	69.9	35.7
	125	Φ63.5	M12深20	88.9	50.8	Φ38	M16深25	79.4	36.5
	145	Φ63.5	M12深20	88.9	50.8	Φ38	M16深25	79.4	36.5
FSG1 高速型 (High-speed type)	160	Φ76	M16深25	106.4	61.9	Φ38	M16深25	79.4	36.5
	25	Φ32	M10深19	58.7	30.2	Φ18	M10深17	47.6	22.2
	32	Φ32	M10深19	58.7	30.2	Φ18	M10深17	47.6	22.2
	40	Φ38.5	M12深21	69.9	35.7	Φ20	M10深17	52.4	26.2
	50	Φ51.5	M12深21	77.8	42.9	Φ25	M10深17	52.4	26.2
FSG2 高速型 (High-speed type)	63	Φ51.5	M12深21	77.8	42.9	Φ25	M10深17	52.4	26.2
	63	Φ40	M12深20	69.9	35.7	Φ23	M10深17	52.4	26.2
	80	Φ50	M12深20	77.8	42.9	Φ32	M12深20	69.9	35.7
	100	Φ64.5	M12深23	88.9	50.8	Φ32	M12深20	69.9	35.7
	125	Φ63.5	M12深20	88.9	50.8	Φ38	M16深25	79.4	36.5
	145	Φ76.5	M16深30	106.4	61.9	Φ38	M16深25	79.4	36.5
160	Φ76	M16深25	106.4	61.9	Φ38	M16深25	79.4	36.5	

FG SERIES DOUBLE PUMP

FG系列双联泵



专注液压传动 & 控制
FOCUS ON HYDRAULIC TRANSMISSION AND CONTROL



特点 Features

双联泵是由两个单泵串联组成，具有一个共用进油口和两个可以通向两个独立回路的出油口。按照两个泵的组合，可获得多种排量。
The double pump is composed of two single pumps assembled in series, with a common oil inlet and two oil outlets that can be fed to two independent circuits. According to the series combination of the two pumps, a variety of displacements can be obtained.

型号说明 Model Description

FG	2	1	-100	-63	-01	R	-V	P	C	-D	
										新设计 new design	D
										法兰安装形式 Flange installation form	
										SAE 2孔 SAE 2 hole	C
										前泵轴伸形式 Front pump shaft extension form	
										平键轴 Flat key shaft	P
										花键轴 Spline shaft	S
										密封形式 Sealed form	
										氟橡胶 Fluororubber	V
										旋转方向 (从轴端看) Rotation direction (viewed from the shaft end)	
										顺时针 Clockwise	R
										设计号 Design number	
											01
										后泵规格 Rear pump specifications	
										排量 (mL/r) Displacement (mL/r)	
										4 8 10 13 16 20 25 32 40 50	
										63 80 100 125 145 160	
										前泵规格 Front pump specifications	
										排量 (mL/r) Displacement (mL/r)	
										25 32 40 50 63 80 100 125 145 160	
										后泵系列号 Rear pump serial number	
										排量4...25 Displacement 4...25	0
										排量25...63 Displacement 25...63	1
										排量63...160 Displacement 63...160	2
										前泵系列 Front pump series	
										排量25...63 Displacement 25...63	1
										排量63...160 Displacement 63...160	2
										泵类型 Pump type	
										内啮合齿轮泵 Internal gear pump	FG

FG SERIES INTERNAL GEAR PUMP

FG系列内啮合齿轮泵

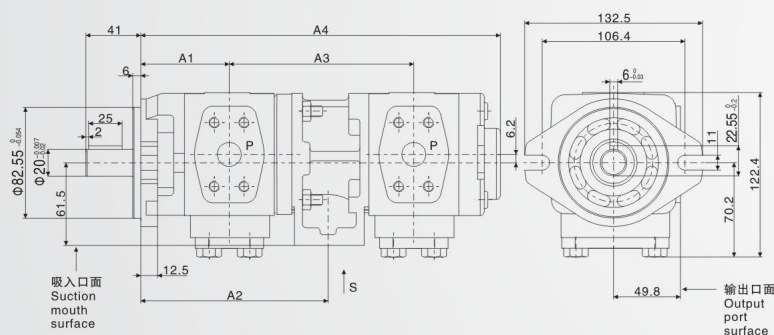
专注液压传动 & 控制
FOCUS ON HYDRAULIC TRANSMISSION AND CONTROL



FG00-※-※-01R-VPC-D (P型平键轴)

FG00-※-※-01R-VPC-D (P-type flat key shaft)

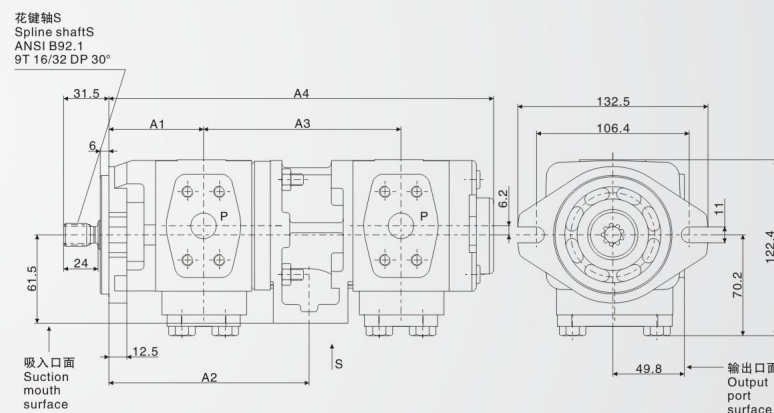
安装连接尺寸 Installation and connection size



FG00-※-※-01R-VSC-D (S型花键轴)

FG00-※-※-01R-VSC-D (S-type spline shaft)

安装连接尺寸 Installation and connection size



泵型号 Pump model	A1	A2	后泵规格 Rear pump specifications														
			8		10		13		16		20		25				
			A3	A4	A3	A4	A3	A4	A3	A4	A3	A4	A3	A4			
FG00-08-※-01R-VPC-D	54	42	113.5	220													
FG00-10-※-01R-VPC-D	56	119.5	115.5	224	117.5	228											
FG00-13-※-01R-VPC-D	59.25	126	118.75	230.5	120.75	234.5	124	241									
FG00-16-※-01R-VPC-D	62	131.5	121.5	236	123.5	240	126.75	246.5	129.5	252							
FG00-20-※-01R-VPC-D	66	139.5	125.5	244	127.5	248	130.75	254.5	133.5	260	137.5	268					
FG00-25-※-01R-VPC-D	70	147.5	129.5	252	131.5	256	134.75	262.5	137.5	268	141.5	276	145.5	284			

●吸油口法兰见第27页See page 27 for the suction port flange
●出油口法兰见第13页See page 13 for outlet flange

泵型号 Pump model	A1	A2	后泵规格 Rear pump specifications														
			8		10		13		16		20		25				
			A3	A4	A3	A4	A3	A4	A3	A4	A3	A4	A3	A4			
FG00-08-※-01R-VSC-D	54	42	113.5	220													
FG00-10-※-01R-VSC-D	56	119.5	115.5	224	117.5	228											
FG00-13-※-01R-VSC-D	59.25	126	118.75	230.5	120.75	234.5	124	241									
FG00-16-※-01R-VSC-D	62	131.5	121.5	236	123.5	240	126.75	246.5	129.5	252							
FG00-20-※-01R-VSC-D	66	139.5	125.5	244	127.5	248	130.75	254.5	133.5	260	137.5	268					
FG00-25-※-01R-VSC-D	70	147.5	129.5	252	131.5	256	134.75	262.5	137.5	268	141.5	276	145.5	284			

●吸油口法兰见第27页See page 27 for the suction port flange
●出油口法兰见第13页See page 13 for outlet flange

FG SERIES INTERNAL GEAR PUMP

FG系列内啮合齿轮泵

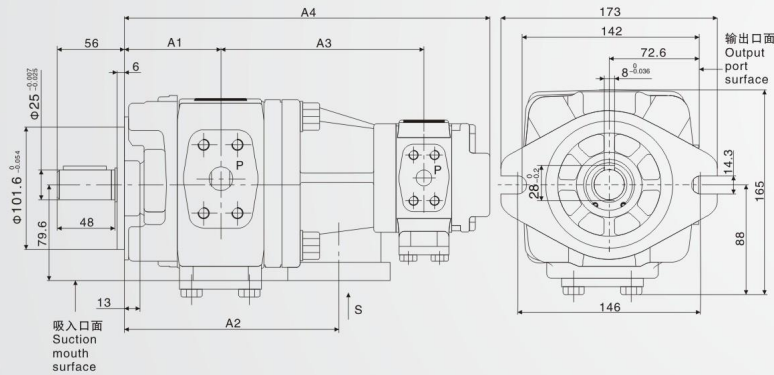
专注液压传动 & 控制
FOCUS ON HYDRAULIC TRANSMISSION AND CONTROL

MYASEK 雅森科液壓

FG10-※-※-01R-VPC-D (P型平键轴)

FG10-※-※-01R-VPC-D (P-type flat key shaft)

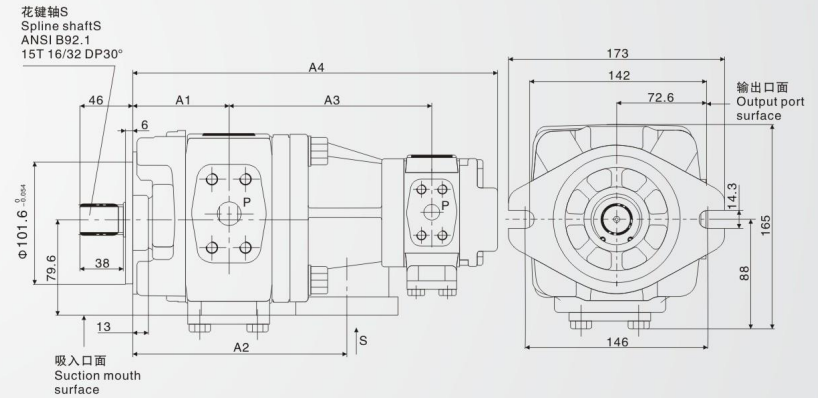
安装连接尺寸 Installation and connection size



FG10-※-※-01R-VSC-D (S型花键轴)

FG10-※-※-01R-VSC-D (S-type spline shaft)

安装连接尺寸 Installation and connection size



泵型号 Pump model	A1	A2	后泵规格 Rear pump specifications											
			8		10		13		16		20		25	
			A3	A4	A3	A4	A3	A4	A3	A4	A3	A4	A3	A4
FG10-25-※-01R-VPC-D	73	153.5	138.5	264.5	140.5	268.5	143.8	275	146.5	280.5	150.5	288.5	154.5	296.5
FG10-32-※-01R-VPC-D	76.5	160.5	142	271.5	144	275.5	147.3	282	150	287.5	154	295.5	158	303.5
FG10-40-※-01R-VPC-D	80	167.5	145.5	278.5	147.5	282.5	150.8	289	153.5	294.5	157.5	302.5	161.5	310.5
FG10-50-※-01R-VPC-D	85	177.5	150.5	288.5	152.5	292.5	155.8	299	158.5	304.5	162.5	312.5	166.5	320.5
FG10-63-※-01R-VPC-D	92	191.5	157.5	302.5	159.5	306.5	162.8	313	165.5	318.5	169.5	326.5	173.5	334.5

- 吸油口法兰见第27页 See page 27 for the suction port flange
- 出油口法兰见第13页 See page 13 for outlet flange

泵型号 Pump model	A1	A2	后泵规格 Rear pump specifications											
			8		10		13		16		20		25	
			A3	A4	A3	A4	A3	A4	A3	A4	A3	A4	A3	A4
FG10-25-※-01R-VSC-D	73	153.5	138.5	264.5	140.5	268.5	143.8	275	146.5	280.5	150.5	288.5	154.5	296.5
FG10-32-※-01R-VSC-D	76.5	160.5	142	271.5	144	275.5	147.3	282	150	287.5	154	295.5	158	303.5
FG10-40-※-01R-VSC-D	80	167.5	145.5	278.5	147.5	282.5	150.8	289	153.5	294.5	157.5	302.5	161.5	310.5
FG10-50-※-01R-VSC-D	85	177.5	150.5	288.5	152.5	292.5	155.8	299	158.5	304.5	162.5	312.5	166.5	320.5
FG10-60-※-01R-VSC-D	92	191.5	157.5	302.5	159.5	306.5	162.8	313	165.5	318.5	169.5	326.5	173.5	334.5

- 吸油口法兰见第27页 See page 27 for the suction port flange
- 出油口法兰见第13页 See page 13 for outlet flange

FG SERIES INTERNAL GEAR PUMP

FG系列内啮合齿轮泵

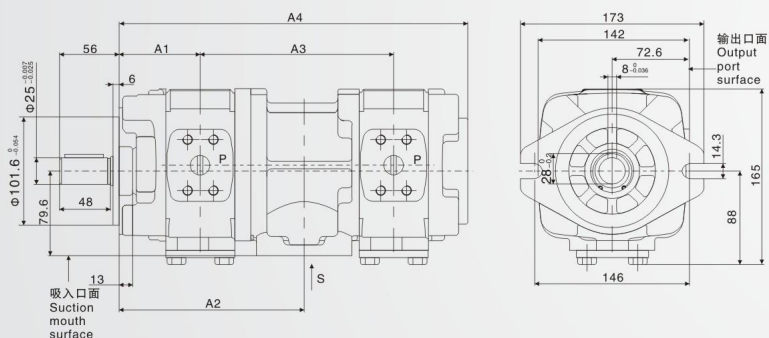
专注液压传动 & 控制
FOCUS ON HYDRAULIC TRANSMISSION AND CONTROL

MYASEK 雅森科液壓

FG11-※-※-01R-VPC-D (P型平键轴)

FG11-※-※-01R-VPC-D (P-type flat key shaft)

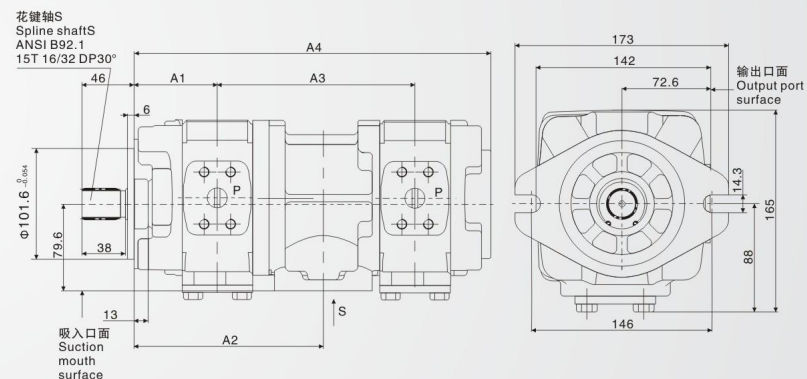
安装连接尺寸 Installation and connection size



FG11-※-※-01R-VSC-D (S型花键轴)

FG11-※-※-01R-VSC-D (S-type spline shaft)

安装连接尺寸 Installation and connection size



泵型号 Pump model	A1	A2	后泵规格 Rear pump specifications												
			25		32		40		50		63				
			A3	A4	A3	A4	A3	A4	A3	A4	A3	A4			
FG11-25-※-01R-VPC-D	73	161	161	300											
FG11-32-※-01R-VPC-D	76.5	168	164.5	307	168	314									
FG11-40-※-01R-VPC-D	80	175	168	314	171.5	321	175	328							
FG11-50-※-01R-VPC-D	85	185	173	324	176.5	331	180	338	185	348					
FG11-63-※-01R-VPC-D	92	199	180	338	183.5	345	187	352	192	362	199	376			

- 吸油口法兰见第27页 See page 27 for the suction port flange
- 出油口法兰见第13页 See page 13 for outlet flange

泵型号 Pump model	A1	A2	后泵规格 Rear pump specifications												
			25		32		40		50		63				
			A3	A4	A3	A4	A3	A4	A3	A4	A3	A4			
FG11-25-※-01R-VSC-D	73	161	161	300											
FG11-32-※-01R-VSC-D	76.5	168	164.5	307	168	314									
FG11-40-※-01R-VSC-D	80	175	168	314	171.5	321	175	328							
FG11-50-※-01R-VSC-D	85	185	173	324	176.5	331	180	338	185	348					
FG11-63-※-01R-VSC-D	92	199	180	338	183.5	345	187	352	192	362	199	376			

- 吸油口法兰见第27页 See page 27 for the suction port flange
- 出油口法兰见第13页 See page 13 for outlet flange

FG SERIES INTERNAL GEAR PUMP

FG系列内啮合齿轮泵

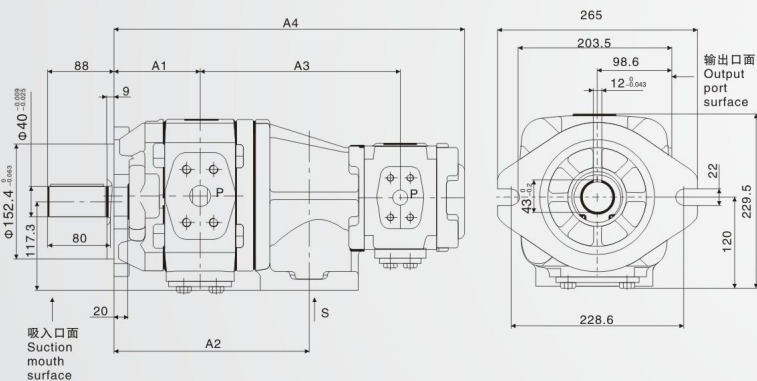
专注液压传动 & 控制
FOCUS ON HYDRAULIC TRANSMISSION AND CONTROL

MYASEK 雅森科液壓

FG21-※-※-01R-VPC-D (P型平键轴)

FG21-※-※-01R-VPC-D (P-type flat key shaft)

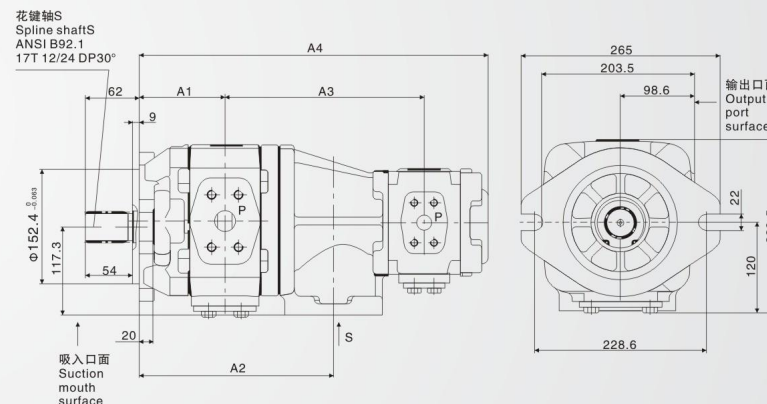
安装连接尺寸 Installation and connection size



FG21-※-※-01R-VSC-D (S型花键轴)

FG21-※-※-01R-VSC-D (S-type spline shaft)

安装连接尺寸 Installation and connection size



泵型号 Pump model	A1	A2	后泵规格 Rear pump specifications									
			25		32		40		50		63	
			A3	A4	A3	A4	A3	A4	A3	A4	A3	A4
FG21-63-※-01R-VPC-D	105.5	223	200.5	372	204	379	207.5	386	212.5	396	219.5	410
FG21-80-※-01R-VPC-D	109.5	231	204.5	380	208	387	211.5	394	216.5	404	223.5	418
FG21-100-※-01R-VPC-D	114	240	209	389	212.5	396	216	403	221	413	228	427
FG21-125-※-01R-VPC-D	120	252	215	401	218.5	408	222	415	227	425	234	439
FG21-145-※-01R-VPC-D	124.8	261.5	219.8	410.5	223.3	417.5	226.8	424.5	231.8	434.5	238.8	448.5
FG21-160-※-01R-VPC-D	129	270	224	419	227.5	426	231	433	236	443	243	457

● 吸油口法兰见第27页 See page 27 for the suction port flange
● 出油口法兰见第13页 See page 13 for outlet flange

泵型号 Pump model	A1	A2	后泵规格 Rear pump specifications									
			25		32		40		50		63	
			A3	A4	A3	A4	A3	A4	A3	A4	A3	A4
FG21-63-※-01R-VSC-D	105.5	223	200.5	372	204	379	207.5	386	212.5	396	219.5	410
FG21-80-※-01R-VSC-D	109.5	231	204.5	380	208	387	211.5	394	216.5	404	223.5	418
FG21-100-※-01R-VSC-D	114	240	209	389	212.5	396	216	403	221	413	228	427
FG21-125-※-01R-VSC-D	120	252	215	401	218.5	408	222	415	227	425	234	439
FG21-145-※-01R-VSC-D	124.8	261.5	219.8	410.5	223.3	417.5	226.8	424.5	231.8	434.5	238.8	448.5
FG21-160-※-01R-VSC-D	129	270	224	419	227.5	426	231	433	236	443	243	457

● 吸油口法兰见第27页 See page 27 for the suction port flange
● 出油口法兰见第13页 See page 13 for outlet flange

FG SERIES INTERNAL GEAR PUMP

FG系列内啮合齿轮泵

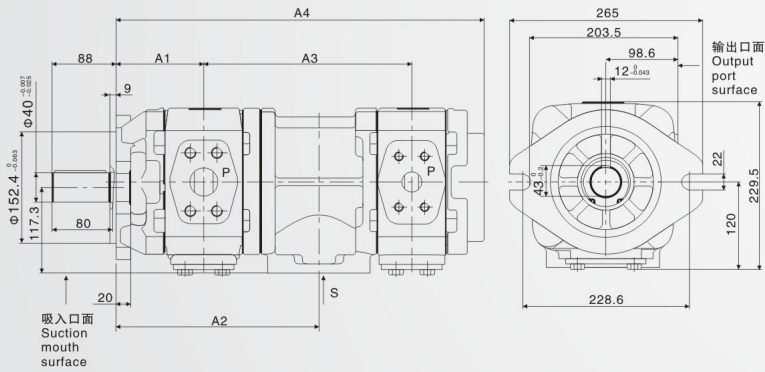
专注液压传动 & 控制
FOCUS ON HYDRAULIC TRANSMISSION AND CONTROL



FG22-※-※-01R-VPC-D (P型平键轴)

FG22-※-※-01R-VPC-D (P-type flat key shaft)

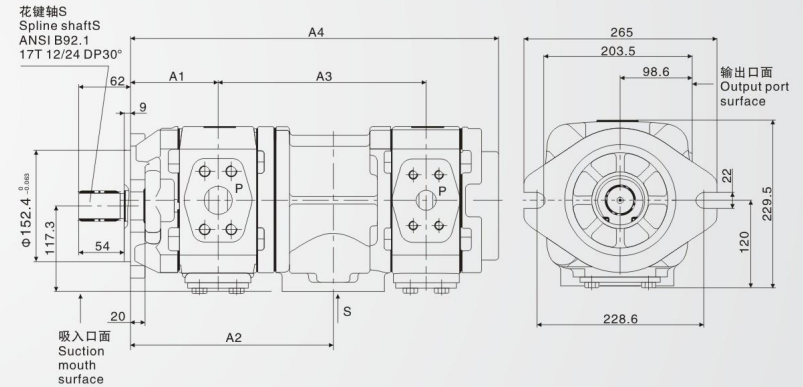
安装连接尺寸 Installation and connection size



FG22-※-※-01R-VSC-D (S型花键轴)

FG22-※-※-01R-VSC-D (S-type spline shaft)

安装连接尺寸 Installation and connection size



泵型号 Pump model	A1	A2	后泵规格 Rear pump specifications														
			63		80		100		125		145		160				
			A3	A4	A3	A4	A3	A4	A3	A4	A3	A4	A3	A4			
FG22-63-※-01R-VPC-D	105.5	230.5	225	421													
FG22-80-※-01R-VPC-D	109.5	238.5	229	429	233	437											
FG22-100-※-01R-VPC-D	114	247.5	233.5	438	237.5	446	242	455									
FG22-125-※-01R-VPC-D	120	259.5	239.5	450	243.5	458	248	467	254	479							
FG22-145-※-01R-VPC-D	124.5	269	244.3	459.5	248.3	467.5	252.8	476.5	258.8	488.5	263.5	498					
FG22-160-※-01R-VPC-D	129	277.5	248.5	468	251.5	476	257	485	263	497	268.3	506.5	272	515			

● 吸油口法兰见第27页 See page 27 for the suction port flange
● 出油口法兰见第13页 See page 13 for outlet flange

泵型号 Pump model	A1	A2	后泵规格 Rear pump specifications														
			63		80		100		125		145		160				
			A3	A4	A3	A4	A3	A4	A3	A4	A3	A4	A3	A4			
FG22-63-※-01R-VSC-D	105.5	230.5	225	421													
FG22-80-※-01R-VSC-D	109.5	238.5	229	429	233	437											
FG22-100-※-01R-VSC-D	114	247.5	233.5	438	237.5	446	242	455									
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● 吸油口法兰见第27页 See page 27 for the suction port flange
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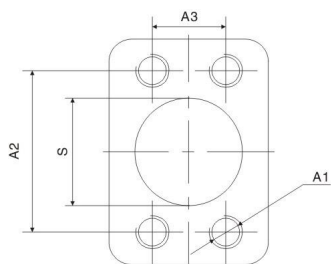
FG SERIES INTERNAL GEAR PUMP

FG系列内啮合齿轮泵

油口法兰连接尺寸

Port flange connection size

双联泵吸入口 “S” Double pump suction port “S”



系列 Series	S	A1	A2	A3
FG00	Φ32	M10通孔	58.7	30.2
FG10	Φ38	M12深20	69.9	35.7
FG11	Φ51	M12深20	77.8	42.9
FG21	Φ76	M16深25	106.4	61.9
FG22	Φ89	M16深25	120.7	69.9

专注液压传动 & 控制
FOCUS ON HYDRAULIC TRANSMISSION AND CONTROL

MYASEK 雅森科液壓

使用注意事项 Precautions for use

以下情况，必须排出吸油配管的空气。

- 油泵的初始运行
- 液压油交换后
- 空气过滤器清扫后

首先，确认油箱是否已注入液压油，出口管路的安全阀是否打开。接着，建议按照以下顺序来进行作业。

a) 进油口在油箱里无负压的情况时

- 取下配管法兰，用手转动油泵主轴，给油泵内部加满液压油。
- 再次去下配管法兰
- 进行点动操作
- 用最高转速进行无负载运行5分钟以上，对空气的排除做最终确认。

b) 进油口在油箱里有负压的情况时

- 打开排油管路的一部分、用手转动油泵主轴，确认打开部分油管是否有液压油流出。
 - 关闭打开部分的排油管路。
 - 进行点动操作。
 - 用最高转速进行无负载运行5分钟以上，对空气的排除做最终确认。
- 推荐用以下方法进行点动操作。**
- 无负载情况下，电机间断运行5~10次。
 - 间断运行时，马达的运转时间为0.5~1秒。
 - 如使用转速可变的电机时，请把转速设定为600rpm以上。

In the following cases, the air from the oil suction piping must be discharged.

- Initial operation of oil pump
- After hydraulic oil exchange
- After the air filter is cleaned

First, confirm whether the oil tank has been injected with hydraulic oil and whether the safety valve of the outlet line is opened. Next, it is recommended that you proceed in the following order.

a) When there is no negative pressure at the oil inlet in the tank

- Remove the pipe flange, turn the oil pump spindle by hand, and fill the oil pump with hydraulic oil.
- Lower the piping flange again
- Perform the click operation
- No load operation at the highest speed for more than 5 minutes, to make final confirmation of air exclusion.

b) When there is negative pressure at the oil inlet in the tank

- Open a part of the oil discharge line, turn the oil pump spindle by hand, and confirm whether there is hydraulic oil flowing out of the open part of the oil pipe. - Close the open part of the oil drain line.
- Perform the click operation.
- No load operation at the highest speed for more than 5 minutes, to make final confirmation of air exclusion. The following methods are recommended for point-and-click operations.
- The motor runs 5~10 times without load.
- During intermittent operation, the running time of the motor is 0.5 to 1 second. - If using a motor with variable speed, please set the speed above 600rpm.

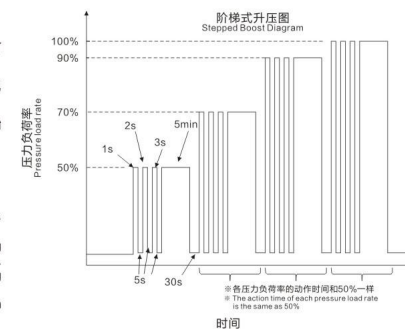
试运行 Test run

油泵的初始运转结束后，请注意以下几点，进行试运行。

- a) 对液压回路的压力做阶段式升压。推荐按以下方式升压。
- 对使用压力按100%来划分、请按压力50/70/90/100%各阶段分别做5分钟的阶段式升压。
 - 设定好上升压力后，实行加载/卸载的短时间操作。（请参照图表）
- b) 在液压回路压力上升的情况时，请注意油泵的工作的异响是否有空气混入。
- 当使用大的蓄能器时，在试运行可能会产生从蓄能器里的空气回流到油箱里面。
 - 当有大量的空气回流到油箱时，请等油箱里的气泡消失掉，再开始试运行。

After the initial operation of the oil pump is over, please pay attention to the following points for trial operation.

- a) Step up the pressure of the hydraulic circuit. The following methods are recommended to boost the pressure.
- For the use of pressure according to 100% division, please according to the pressure 50/70/90/100% stage to do 5 minutes of stage pressure.
 - After setting the rising pressure, perform a short loading/unloading operation. (Please refer to chart)
- b) When the pressure of the hydraulic circuit rises, please pay attention to whether the abnormal sound of the oil pump is mixed with air.
- When using a large accumulator, air from the accumulator may flow back into the tank during the test run.
 - When there is a large amount of air back to the tank, please wait for the gas bubble in the tank to disappear before starting the test run.



PRECAUTIONS FOR USE

使用注意事项

使用前

Before

1、首先

使用前请仔细阅读FG泵使用说明书，理解内容后再开始使用。

- 使用说明书是为了让您正确安全地使用FG泵而制作的。
- 请遵循使用说明书上的使用方法和限制条件。
- 如未按照使用说明书上的使用方法和限制条件使用，可能发生泵停止运转、破损等事故，有可能造成人员受伤或物品受损，请立即停止不正确的使用。
- 因设计变更或改良，有可能出现本使用说明书的内容与您购买的产品不一致的情况。
- 如对购买的产品或使用说明书的内容有疑问，请咨询我公司油机事业部营业G处。

2、和实物对照

接收产品后，请将订购内容和实物进行对照。

3、安全事项

使用说明书按照以下符号标记显示正确安全使用泵的必要事项

- ⚠危险**：紧急危险状态，如不回避可能发生人员死亡或重伤的事故。
- ⚠警告**：潜在的危险状态，如不回避可能发生人员死亡或重伤的事故。
- ⚠注意**：潜在的危险状态，可能发生人员轻伤或中等程度人身伤害的事故。或者可能发生物品受损的情况。

1. First

Please read the FG pump instructions carefully before use, and understand the contents before use.

- The operating instructions are made for you to use the FG pump correctly and safely.
- Please follow the instructions and restrictions on use.
- If the pump is not used according to the use method and restrictions in the instruction manual, it may stop the transfer of the pump, damage and other accidents, which may cause injuries or damage to the goods, please stop the incorrect use immediately.
- Due to design changes or improvements, the contents of this instruction manual may be inconsistent with the products you purchased.
- If you have any questions about the purchased products or the contents of the instruction manual, please contact our oil engine Business Office G.

2. Compare with real objects

After receiving the product, please compare the ordered content with the actual product.

3. Security matters

The instruction manual shows the necessary matters for the correct and safe use of the pump in accordance with the symbols marked below

- Danger**：Emergency danger, if not avoided may result in death or serious injury accident.
- Warning**：A potentially dangerous situation, such as an accident that could result in death or serious injury.
- Look out**：A potentially hazardous condition that may result in minor or moderate personal injury. Or there may be damage to the item.

安全上的注意事项 Safety precautions

1、产品使用时的注意事项

- ⚠警告**：请确认产品的重量（记载于外形尺寸表）。重量超过20kg时，请勿徒手搬运。
- ⚠警告**：用吊具搬运过程中，绝对不要靠近。

2、产品安装、拆卸、固定时的注意事项

- ⚠警告**：请让专业人士进行安装、拆卸、固定作业。（专业人士：油压调整士2级水平的人）
- ⚠警告**：在安装、拆卸、固定产品前，请务必切断装置电源，清除管路残留压力。此外运转后产品及液压油可能处于高温状态，请确认温度降至适温（30~40℃）后再行处置。
- ⚠注意**：请勿对泵施加外力，如站在泵上或敲击泵。有可能造成人员受伤或产品破损。
- ⚠注意**：安装时请务必用适当的扭力旋紧规定的螺栓。
- ⚠注意**：请清洁安装面及安装孔。

3、运转中的注意事项

- ⚠危险**：转轴必须安装保护盖，保护盖与转动部位距离不超过一指。泵运转过程中请绝对不要接触转动部位。
- ⚠警告**：请在周围温度、液压油的温度、粘度等规定的使用环境条件范围内使用泵。如在使用范围外使用，可能发生机器运转失灵、损坏甚至火灾。
- ⚠注意**：泵的主体在运转时温度会变高，请勿直接用手触碰。

4、保养上的注意事项

- ⚠注意**：未经我公司同意，请勿拆卸、重组、改造泵。如未经我公司同意，拆卸、重组、改造泵，则不在我公司的保修范围之内，我公司不承担任何责任。

1. Precautions for product use

- ⚠ warn**：Please confirm the weight of the product (as shown in the dimensions chart). If the weight is greater than 20kg, do not carry it with bare hands.
- ⚠ warn**：Do not approach during handling with spreader.

2, Product installation, disassembly, fixing precautions

- ⚠ warn**：Please allow professionals to install, disassemble and fix. (Professional: Oil pressure regulator Level 2)
- ⚠ warn**：Before installing, removing, or securing the product, cut off the power supply to clear the residual pressure in the pipe. In addition, the product and hydraulic oil may be in a high temperature state after operation, please confirm that the temperature drops to the appropriate temperature (30~40℃) before disposal.
- ⚠ Look out**：Do not apply external force to the pump, such as standing on the pump or knocking the pump. May result in injury or damage to the product.
- ⚠ Look out**：When installing, be sure to tighten the specified bolts with the appropriate torque.
- ⚠ Look out**：Clean the mounting surface and holes.

3. Precautions in operation

- ⚠ Danger**：The rotating shaft must be installed with a protective cover, and the distance between the protective cover and the rotating part should not exceed one finger. Never touch the rotating part of the pump during operation.
- ⚠ warn**：Please use the pump in the ambient temperature, hydraulic oil temperature, viscosity and other specified environmental conditions. If used outside the scope of use, the machine may malfunction, damage or even fire.
- ⚠ Look out**：The temperature of the pump body will become high during operation, do not touch it directly with your hand.

4, Maintenance precautions

- ⚠ Look out**：Do not disassemble, reassemble or transform the pump without our consent. If without the consent of our company, disassembly, reorganization, transformation of the pump, it is not within the scope of our company's warranty, our company does not assume any responsibility.