

## IGP Series Internal Gear Pump

### ■ Product show and brief introduction

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#### Standare type IGP

Size 08...160  
Series IGP0.IGP1.IGP2  
Nominal Perssure 31.5 MPa  
Peak pressure 35 Mpa

#### Standare type IGP(11)

Size 25...160  
Series IGP1(11).IGP2(11)  
Nominal Perssure 31.5 MPa  
Peak pressure 35 Mpa



### ■ Features

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- High efficiency also at low speed and viscosity due to sealing gap compensation.
- Suitable for a wide speed range, maximum speed is up to 3000r/min.
- Low operating noise, little flow pulsation, stable flow and pressure output can still be maintained at low speeds.
- High pressure design, the maximum working pressure can reach 35Mpa.
- Insensitive to oil contamination, strong anti-fouling ability and long service life.
- All specifications can be combined with each other in any form.

### ■ High speed type

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- Through the analysis of the flow rate of oil suction and pressure oil under high-speed and high-pressure conditions, the internal oil passages are re-optimized and enlarged suction port.
- Optimized the internal structure, improve the pressure compensation structure dynamic stability, products reliability improved .

## Model Code

	IGP	1	-30	/63	R	P	11	V	U2
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Pump type

Internal gear pump	IGP
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Series

Displacement 8...20	0
Displacement 25...63	1
Displacement 80...160	2

Design code

	30
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Size

Displacement (mL/r)										
8	10	13	16	20	25	32	40	50	63	
80	100	125	160							

Direction of rotating(viewed on shaft end)

CW	R
CCW	L

Shaft

Key shaft	P
Spling shaft	S

Standard type

Standard type	/
High speed type	11

Seal type

FKM	V
NBR	W

Mounting flange

SAE 2 holes	U2
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## Function, Section

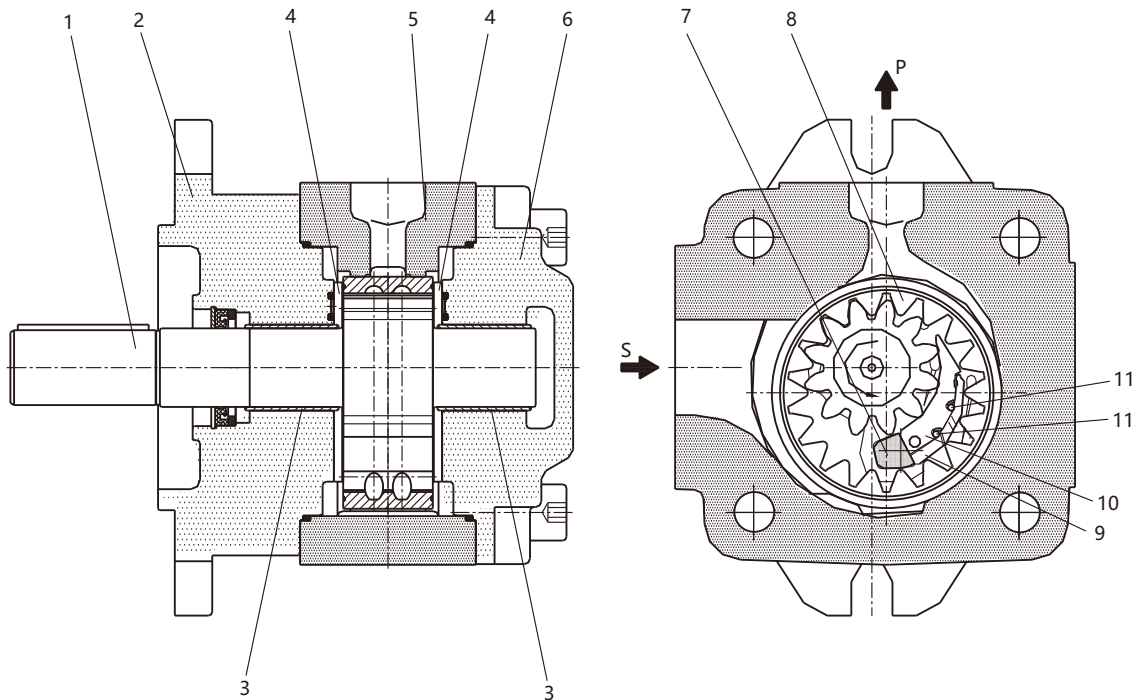
### Structure

IGP is fixed displacement and Intermittent compensation internal gear pump.

Component parts: (1)pinion shaft.(2)Front body.(3)Sliding bearing.(4)Side plate.(5)Middle Housing.

(6)rear cover.(7)Locating rod.(8)Annular gear.(9)Crescent side plate.(10) Crescent main plate.

(11)plastic rod



### ● Axial clearance compensation

The displacement chamber in the pressure area is axially sealed by front and rear plates (3). The sides of the front and rear plates facing away from the displacement area are backed by a pressure field. These fields balance the plates and the displacement area, which results in a perfect sealing with low mechanical losses.

### ● Radial seal compensation

The radial compensation elements consist of (9)Crescent side plate,(10) Crescent main plate and (11)plastic rod. Crescent side plate and Crescent main plate are arranged in the pressure field so that the resulting compressive force is basically accepted by the locating rod. The clearance adjustment of Crescent side plate and Crescent main plate is made possible by the plastic rod located inbetween.

## Technical Data (Please contact with Ethan when the application outside these parameters)

### ● Hydraulic fluid

HLP-mineral oil according to DIN 51524 part 2  
 HFC-water polymer solutions according to DIN EN ISO12922 Seal design W  
 HEES -fluids according to DINISO 5380  
 HFD-U-fluids according to VDMA 24317 DIN ENISO 12922  
 Suggest to use ISO Vg46 fluid, other fluid requirement is available

### ● Temperature range

HLP fluid: -10 to+80; for other temperatures please consult us!  
 Special fluid: -10 to+50; for other temperatures please consult us!

### ● Operating viscosity range

10 to 300mm<sup>2</sup>/s ( to n=2000 r/min )  
 10 to 100mm<sup>2</sup>/s ( to n=3000 r/min )

### ● Filtration

The finer the filtration the better the cleanliness of the pressure fluid and the longer the life of the axial piston unit.  
 To ensure the functioning of the axial piston unit a minimum cleanliness level of:  
 9 to NAS 1638  
 18/15 to ISO/DIS 4406 is necessary

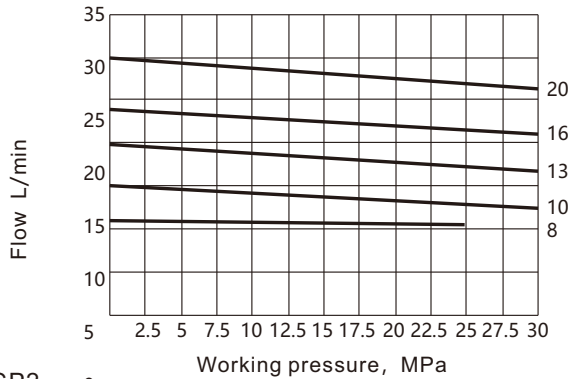
### ● Performance parameter

MODEL	SIZE	DESP. mL/r	PRESSURE MPa		ROTATING SPEED r/min		WEIGHT kg
			RATED	MAX	MAX	MIN	
IGP0	8	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
IGP1	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
IGP2	80	81.4	31.5	35	3000	200	43.5
	100	100.2	31.5	35	3000	200	45.5
	125	125.3	31.5	35	3000	200	48
	145	145.2	25	28	3000	200	50
	160	160.8	21	26	3000	200	52

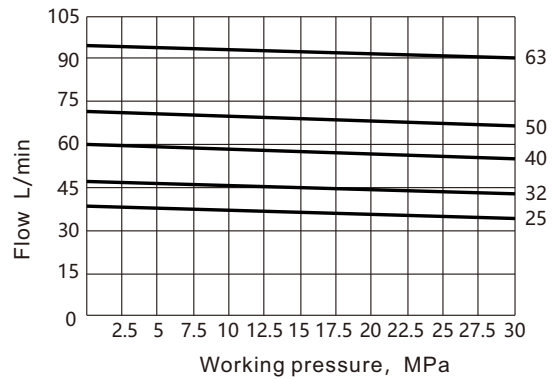
**Characteristic curve**

Flow and pressure features: (Testing condition:  $n=1450\text{r/min}$ ,  $v=46\text{mm}^2/\text{s}$ ,  $t=50^\circ\text{C}$ )

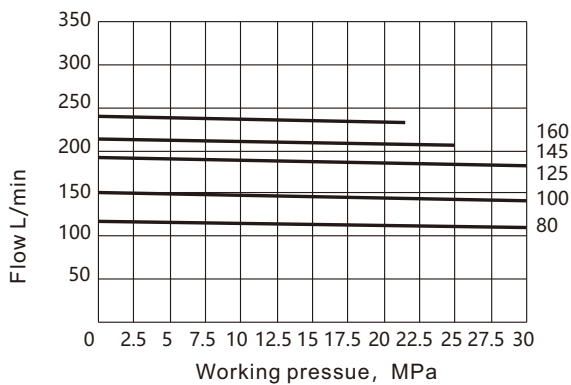
IGP0



IGP1



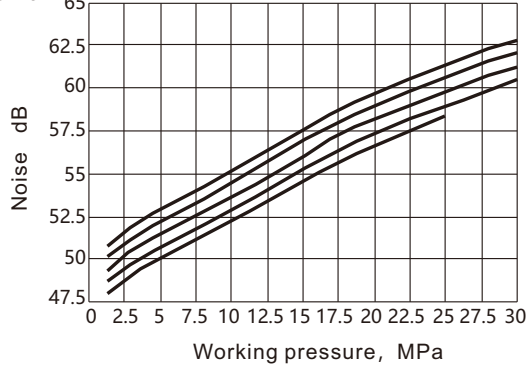
IGP2



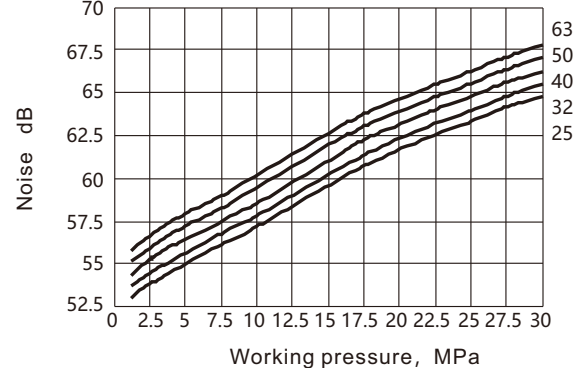
**Noise diagram:**

(Test condition:  $n=1450\text{r/min}$ ,  $v=46\text{mm}^2/\text{s}$ ,  $t=50^\circ\text{C}$  The distance between detector and pump=1m)

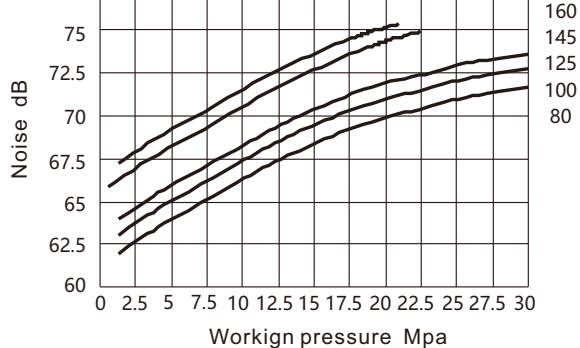
IGP0



IGP1

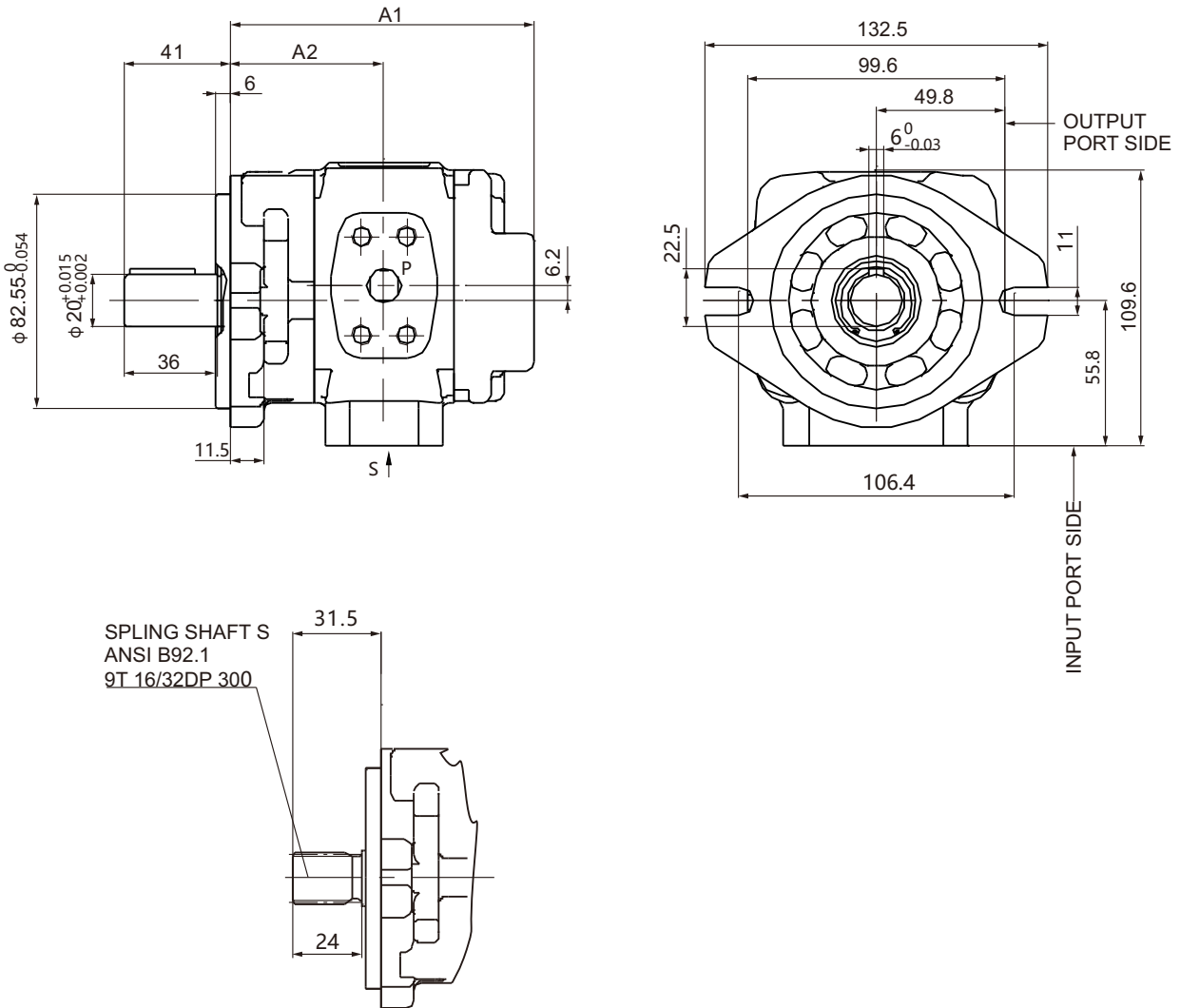


IGP2



## Installation Dimensions

IGP0 series

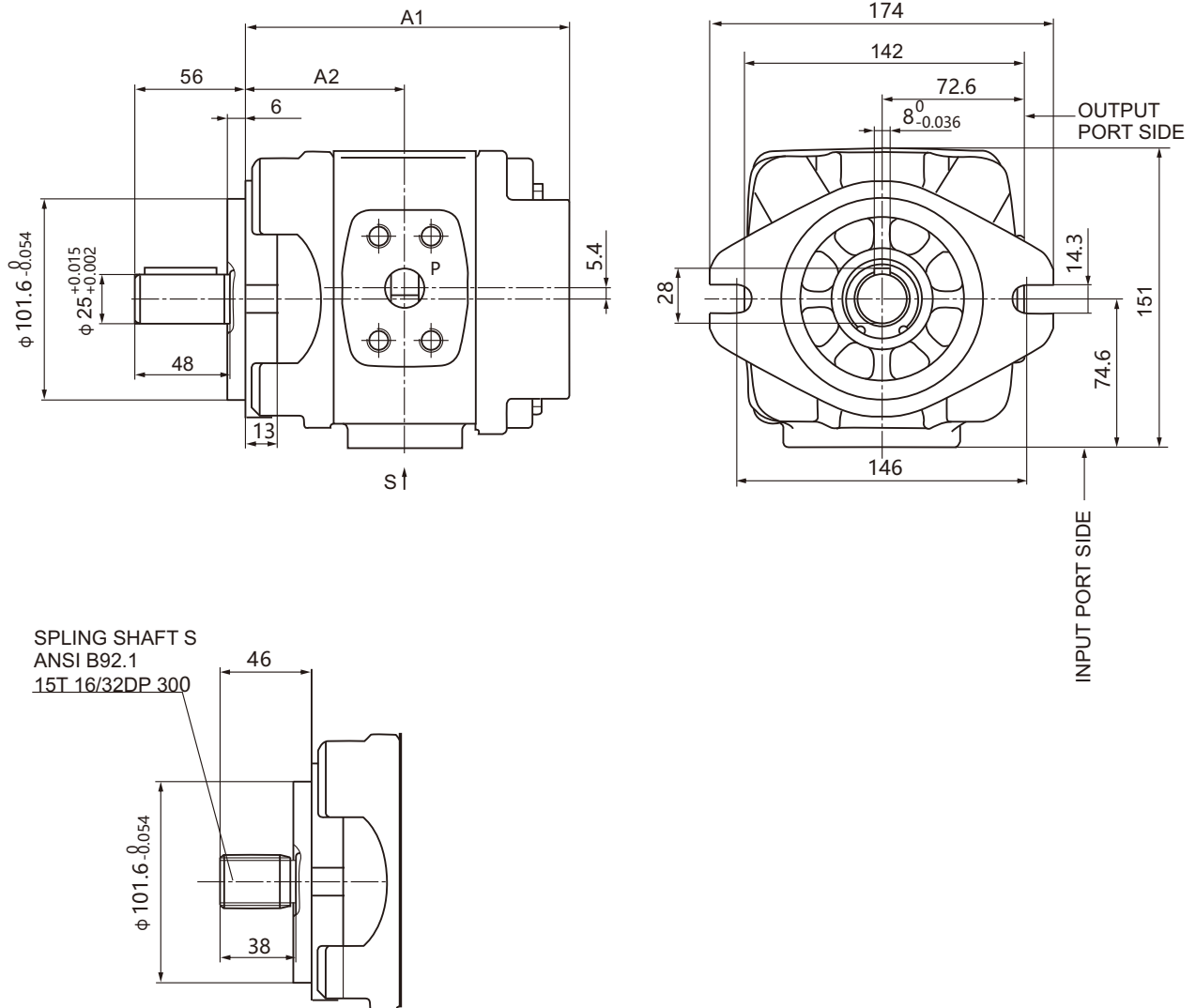


MODEL CODE	A1	A2	S	P
IGP0-30/008***U2	102.5	54	$\phi 20$	$\phi 13$
IGP0-30/010***U2	106.5	56		
IGP0-30/013***U2	113	59.3		
IGP0-30/016***U2	118.5	62	$\phi 26$	$\phi 20$
IGP0-30/020***U2	126.5	66		

● 1.PORT DIMENSION FLANGE (PAGE 9) 2.\* stand for optional configuration

## Installation Dimensions

### IGP1 series

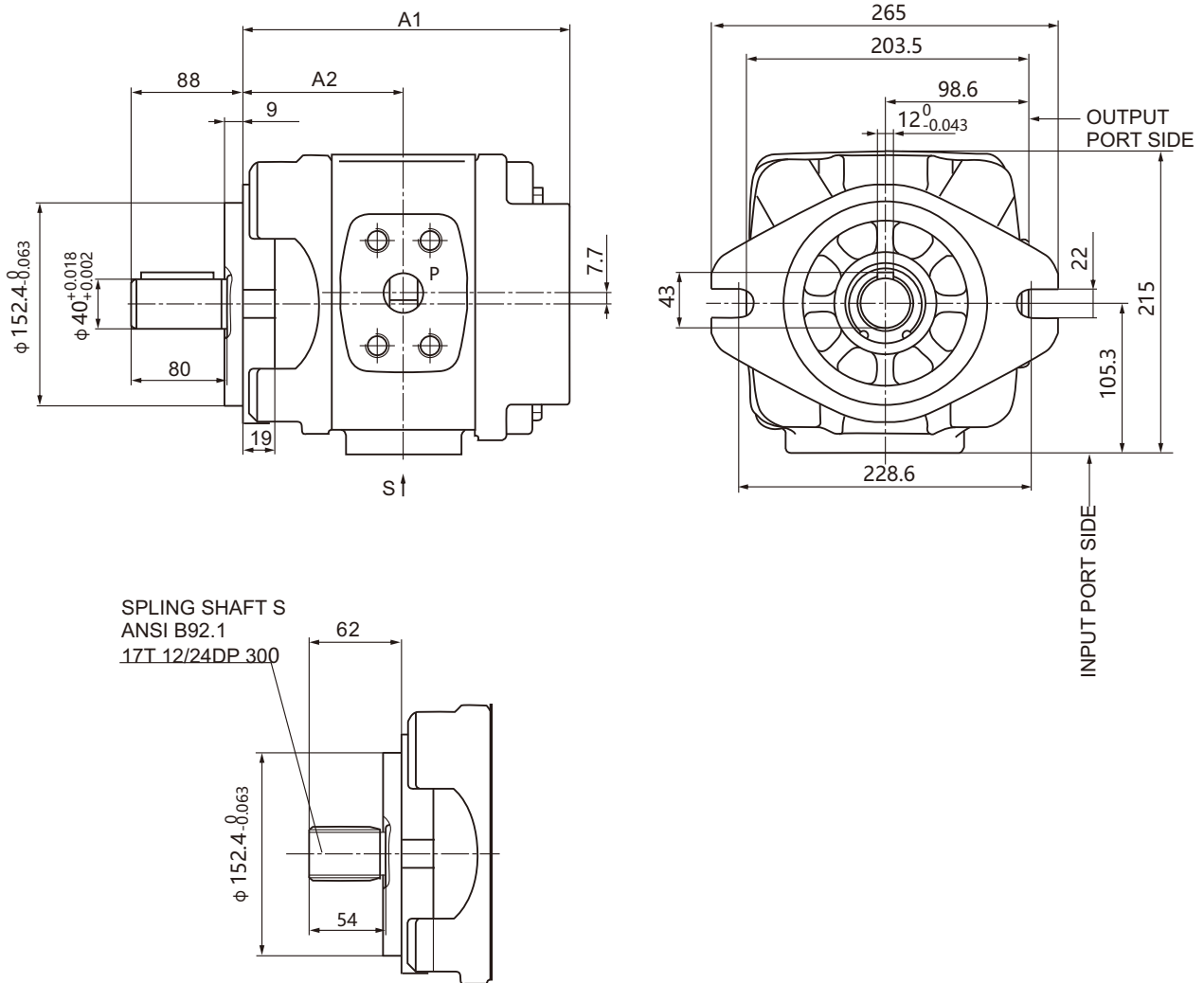


MODEL CODE	A1	A2	S	P
IGP1-30/025***U2	139	73	$\phi 32$	$\phi 18$
IGP1-30/032***U2	146	76.5		
IGP1-30/040***U2	153	80	$\phi 32$	$\phi 20$
IGP1-30/040**11**U2			$\phi 38$	
IGP1-30/050***U2	163	85	$\phi 32$	$\phi 25.4$
IGP1-30/050**11**U2			$\phi 51$	
IGP1-30/063***U2	177	92	$\phi 32$	$\phi 20$
IGP1-30/063**11**U2			$\phi 51$	$\phi 32$

● 1.PORT DIMENSION FLANGE (PAGE 9) 2.\*\* stand for optional configuration

## Installation Dimensions

### IGP2 series

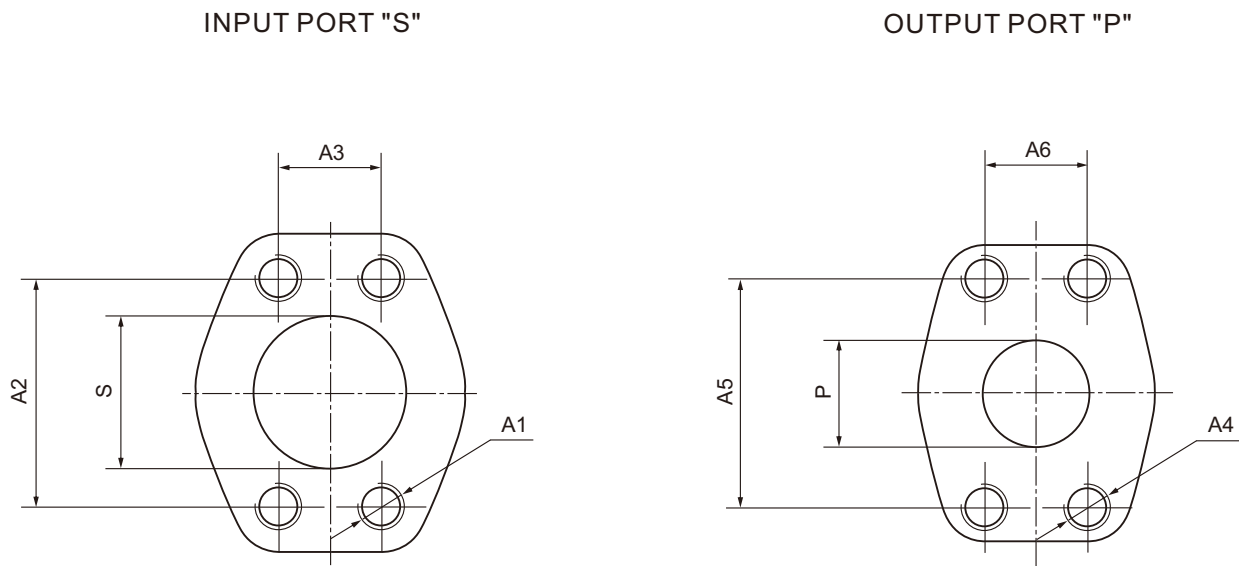


MODEL CODE	A1	A2	S	P
IGP2-30/080***U2	199	109.5	$\phi 51$	$\phi 32$
IGP2-30/100***U2	208	114	$\phi 51$	
IGP2-30/100***11U2			$\phi 64$	
IGP2-30/125***U2	220	120	$\phi 64$	$\phi 38$
IGP2-30/145***U2	229.5	125	$\phi 64$	
IGP2-30/145***11U2			$\phi 76$	
IGP2-30/160***U2	238	129	$\phi 76$	

● 1.PORT DIMENSION FLANGE (PAGE 9) 2.\*\*\* stand for optional configuration



## Port Flange Dimension



MODEL	SIZE	S	A1	A2	A3	P	A4	A5	A6
IGP0	8	φ20	M10;15	47.6	22.2	φ13	M8 ; 13	38.1	17.5
	10			52.4	26.2				
	13			58.7	30.2				
	16	φ26		58.7	30.2	φ20	M10 ; 15	47.6	22.2
IGP1	25	φ32	M10;19	58.7	30.2	φ18	M10 ; 17	47.6	22.2
	32								
IGP1	40	φ32	M10;19	58.7	30.2	φ20	M10 ; 17	52.4	26.2
IGP1(11)	40	φ38	M12;21	69.9	35.7				
IGP1	50	φ32	M10;19	58.7	30.2				
IGP1(11)	50	φ51	M12;21	77.8	42.9	φ25.4	M12 ; 21	57.2	27.8
IGP1	63	φ32	M10;19	58.7	30.2	φ20	M10 ; 17	52.4	26.2
IGP1(11)	63	φ51	M12;21	77.8	42.9	φ32	M12 ; 21	66.6	31.8
IGP2	80	φ51	M12;23	77.8	42.9	φ32	M12 ; 20	69.9	35.7
IGP2	100	φ51	M12;23	77.8	42.9				
IGP2(11)	100	φ64	M12;23	88.9	50.8				
IGP2	125	φ64	M12;23	88.9	50.8	φ38	M16 ; 25	79.4	36.5
IGP2	145	φ64	M12;23	88.9	50.8				
IGP2(11)	145	φ76	M16;30	106.4	61.9				
IGP2	160	φ76	M16;30	106.4	61.9				

## IGP Series DOUBLE PUMP

### ■ Product show and brief introduction

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#### IGP10 SERIES

SIZE: 25、32、40、50、63

SIZE: 8、10、13、16、20

#### IGP11 SERIES

SIZE: 25、32、40、50、63

SIZE: 25、32、40、50、63

#### IGP21 SERIES

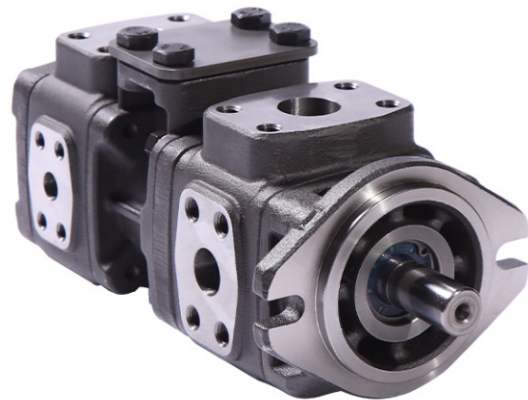
SIZE: 80、100、125、145、160

SIZE: 25、32、40、50、63

#### IGP22 SERIES

SIZE: 80、100、125、145、160

SIZE: 80、100、125、145、160



### ■ Features

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- The double pump is composed of two single pumps assembled in series, with a common oil inlet and two oil outlet that can be fed to two independent circuits. A variety of displacement rates can be obtained according to the series combination of two pumps.
- The same drive greatly reduces equipment system costs and reduces installation space
- The combined pump has a compact structure, low production cost, small size, light weight, and is convenient for installation and maintenance of the front and rear pumps.

## Model Code

IGP	1	0	-30	/40	-16	R	P	11	V	U2
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Pump type

Internal gear pump	IGP
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Series

Displacement 8...20	0
Displacement 25...63	1
Displacement 80...160	2

Series

Displacement 8...20	0
Displacement 25...63	1
Displacement 80...160	2

Design code

30
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Size

Displacement (mL/r)										
8	10	13	16	20	25	32	40	50	63	
80	100	125	160							

Size

Displacement (mL/r)										
8	10	13	16	20	25	32	40	50	63	
80	100	125	160							

Direction of rotating(viewed on shaft end)

CW	R
CCW	L

Shaft

Key shaft	P
Spling shaft	S

Standard type

Standard type	/
High speed type	11

Seal type

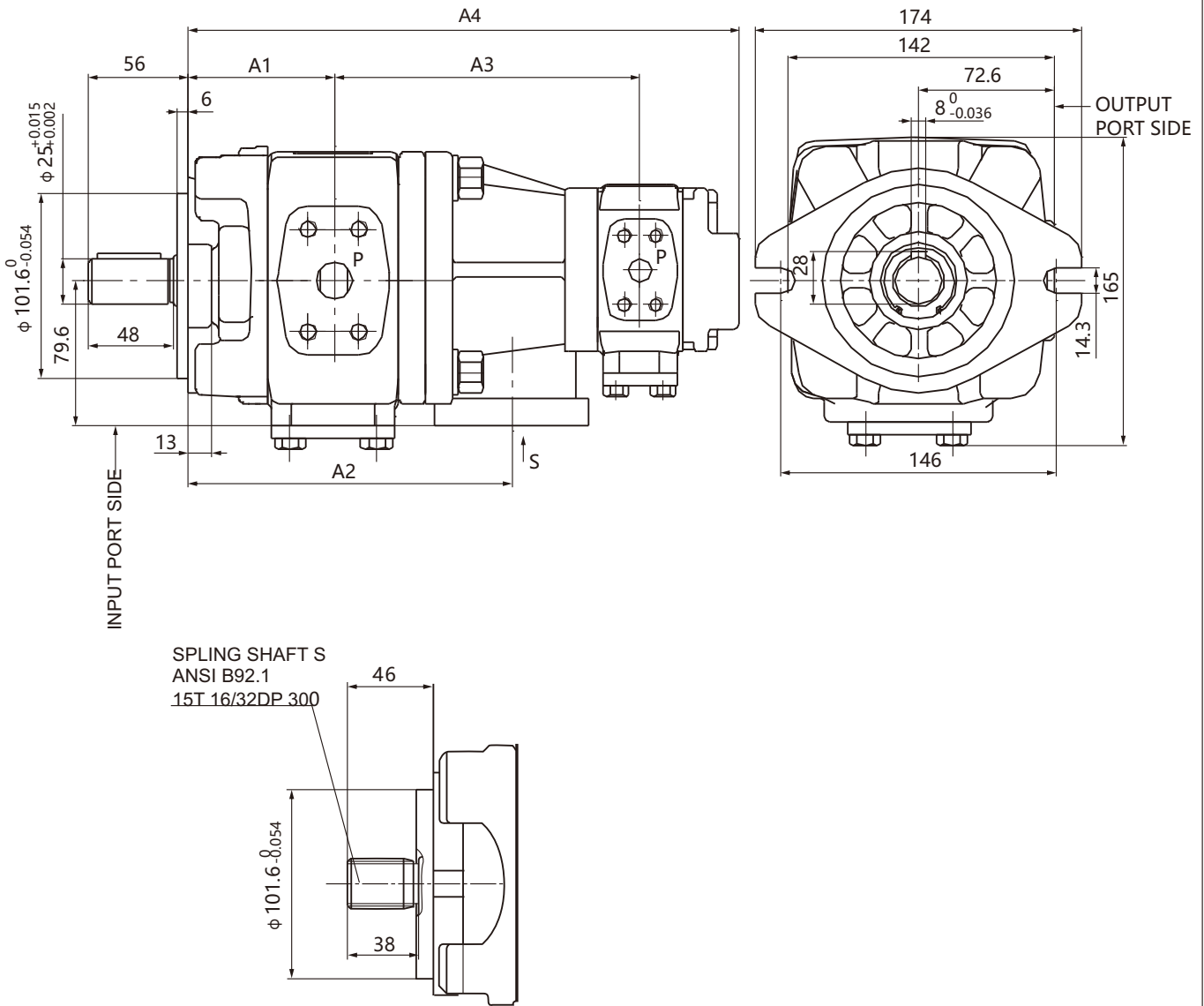
FKM	V
NBR	W

Mounting flange

SAE 2 holes	U2
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**Installation Dimensions**

IGP10-30/※※R※※U2 series

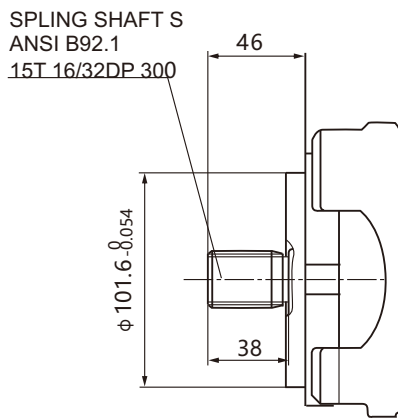
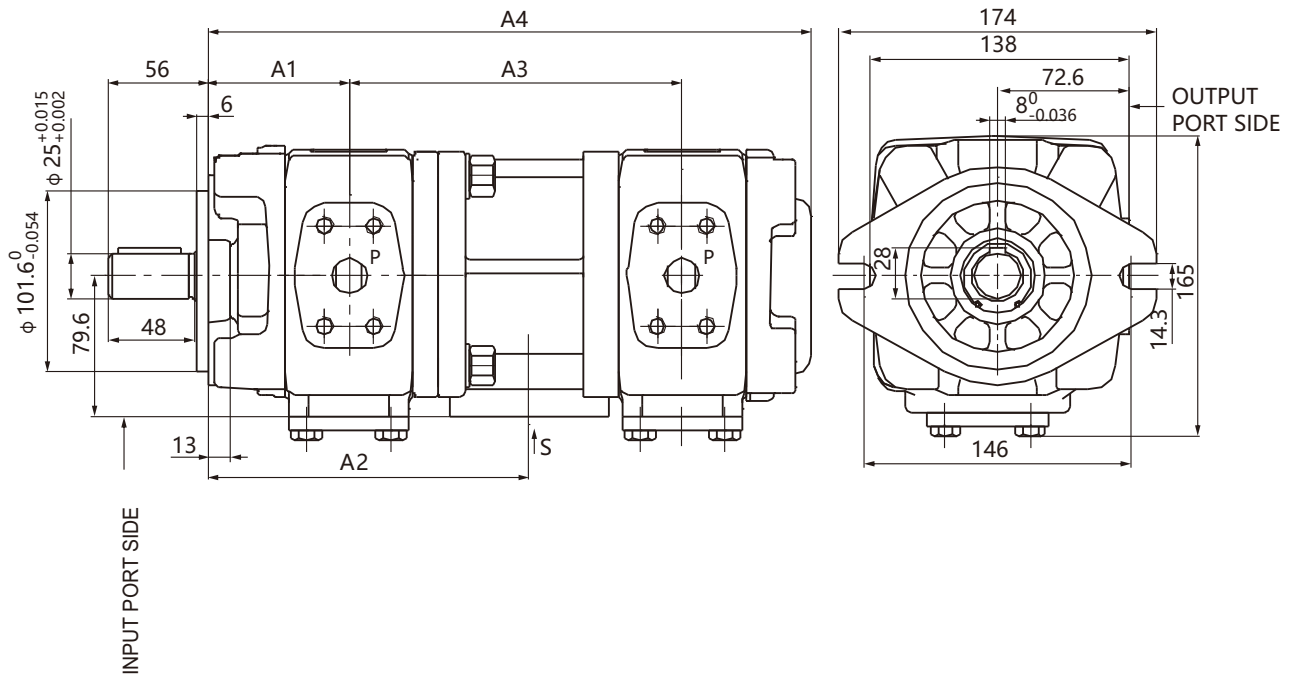


MODEL CODE	A1	A2	REAR PUMP DIMENSIONS									
			08		10		13		16		20	
			A3	A4	A3	A4	A3	A4	A3	A4	A3	A4
IGP10-30/025※※R※※U2	73	153.5	138.5	260	140.5	264	143.8	270.5	146.5	276	150.5	284
IGP10-30/032※※R※※U2	76.5	160.5	142	267	144	271	147.3	277.5	150	283	154	291
IGP10-30/040※※R※※U2	80	167.5	145.5	274	147.5	278	150.8	284.5	153.5	290	157.5	298
IGP10-30/050※※R※※U2	85	177.5	150.5	284	152.5	288	155.8	294.5	158.5	300	162.5	308
IGP10-30/063※※R※※U2	92	191.5	157.5	298	159.5	302	162.8	308.5	165.5	314	169.5	322

- 1.PORT DIMENSION FLANGE (PAGE 9, 16)    2.※ stand for optional configuration

Installation Dimensions

IGP11-30/※※R※※U2 series

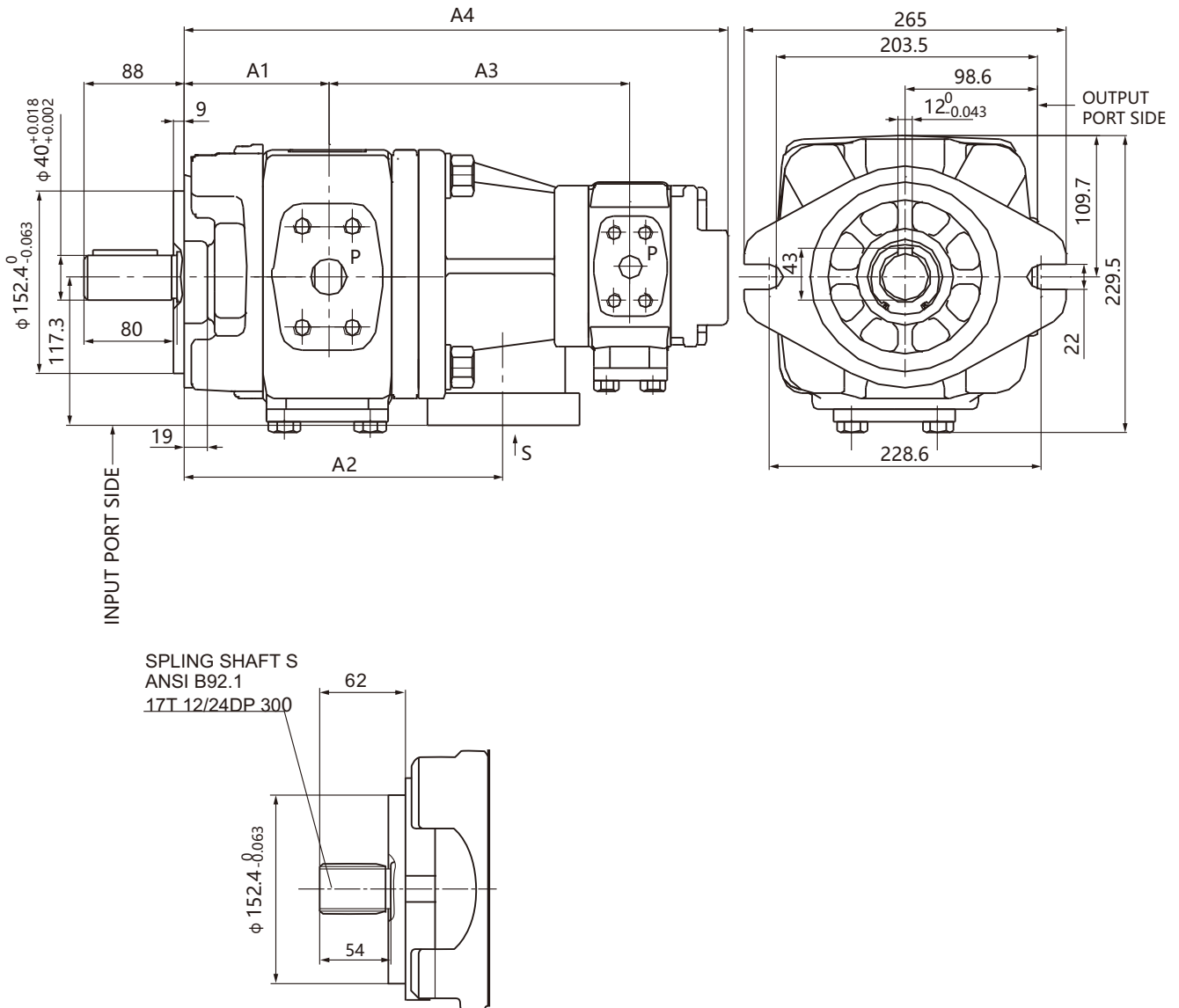


MODEL CODE	A1	A2	REAR PUMP DIMENSIONS										
			25		32		40		50		63		
			A3	A4	A3	A4	A3	A4	A3	A4	A3	A4	
IGP11-30/025※※R※※U2	73	161	161	300									
IGP11-30/032※※R※※U2	76.5	168	164.5	307	168	314							
IGP11-30/040※※R※※U2	80	175	168	314	171.5	321	175	328					
IGP11-30/050※※R※※U2	85	185	173	324	176.5	331	180	338	185	348			
IGP11-30/063※※R※※U2	92	199	180	338	183.5	345	187	352	192	362	199	376	

- 1.PORT DIMENSION FLANGE (PAGE 9, 16) 2.※ stand for optional configuration

**Installation Dimensions**

IGP21-30/※※R※※U2 series

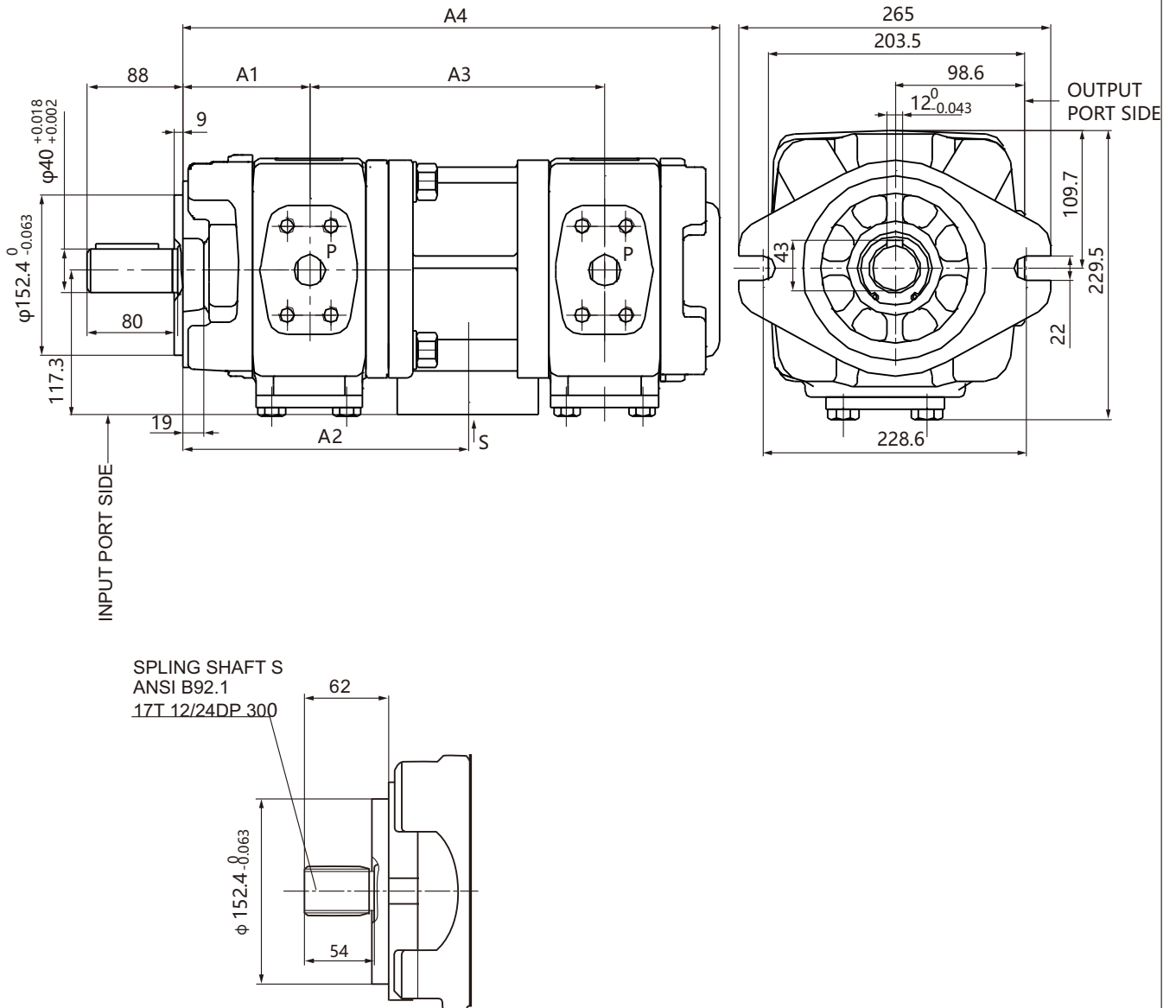


MODEL CODE	A1	A2	REAR PUMP DIMENSIONS									
			25		32		40		50		63	
			A3	A4	A3	A4	A3	A4	A3	A4	A3	A4
IGP21-30/080※※R※※U2	109.5	231	204.5	380	208	387	211.5	394	216.5	404	223.5	418
IGP21-30/100※※R※※U2	114	240	209	389	212.5	396	216	403	221	413	228	427
IGP21-30/125※※R※※U2	120	252	215	401	218.5	408	222	415	227	425	234	439
IGP21-30/145※※R※※U2	124.8	261.5	219.8	410.5	223.3	417.5	226.8	424.5	231.8	434.5	238.8	448.5
IGP21-30/160※※R※※U2	129	270	224	419	227.5	426	231	433	236	443	243	457

- 1.PORT DIMENSION FLANGE (PAGE 9, 16)    2.※ stand for optional configuration

**Installation Dimensions**

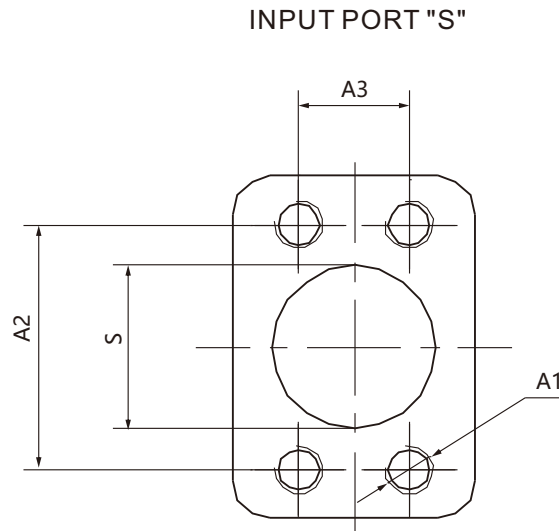
IGP22-30/※※R※※U2 series



MODEL CODE	A1	A2	REAR PUMP DIMENSIONS										
			080		100		125		145		160		
			A3	A4	A3	A4	A3	A4	A3	A4	A3	A4	
IGP22-30/080※※R※※U2	109.5	238.5	233	432									
IGP22-30/100※※R※※U2	114	247.5	237.5	441	242	450							
IGP22-30/125※※R※※U2	120	259.5	243.5	453	248	462	254	474					
IGP22-30/145※※R※※U2	124.8	269	248.3	462.5	252.8	471.5	258.8	483.5	263.5	493			
IGP22-30/160※※R※※U2	129	277.5	252.5	471	257	480	263	492	267.8	501.5	272	510	

- 1.PORT DIMENSION FLANGE (PAGE 9, 16)    2.※ stand for optional configuration

## Port Flange Dimension



MODEL	S	A1	A2	A3
IGP10-30/✕✕R✕✕✕U2	φ 38	M12 DEEP 20	69.9	35.7
IGP11-30/✕✕R✕✕✕U2	φ 51		77.8	42.9
IGP21-30/✕✕R✕✕✕U2	φ 76	M16 DEEP 25	106.4	61.9
IGP22-30/✕✕R✕✕✕U2	φ 89		120.7	69.9

- 1.PORT DIMENSION FLANGE (PAGE 9, 16)    2.✕ stand for optional configuration