

Pearl

Pearl Swivel Joint

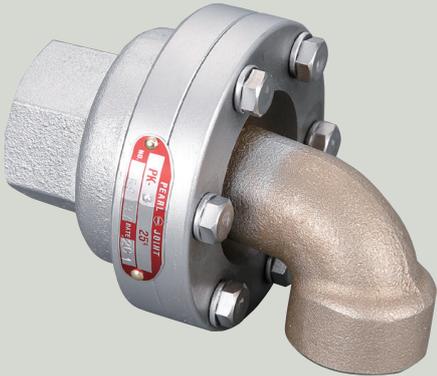
— Swivel Joint —

PK Series

CATALOG

PEARL  JOINT
株式会社 昭和技研工業
SHOWA GIKEN INDUSTRIAL CO., LTD.

PK Series



Features

A self-aligning type that allows easy pipe laying.

Installation is easy as the product is small and lightweight.

Greasing is not required and maintenance is easy.

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The contents are subject to change without notice.

Service Conditions

Series	Connection	Material (main parts)	Seal Ring	Style	Size	Max.	
						Pressure (MPa)	Temperature (°C)
PK 	Taper Thread (Rc/R)	Ductile Cast Iron Bronze	PTFE	1~4	15A~50A	2.3	230

Styles

The PK series provides four different styles of shapes.

Style 1



Style 2



Style 3

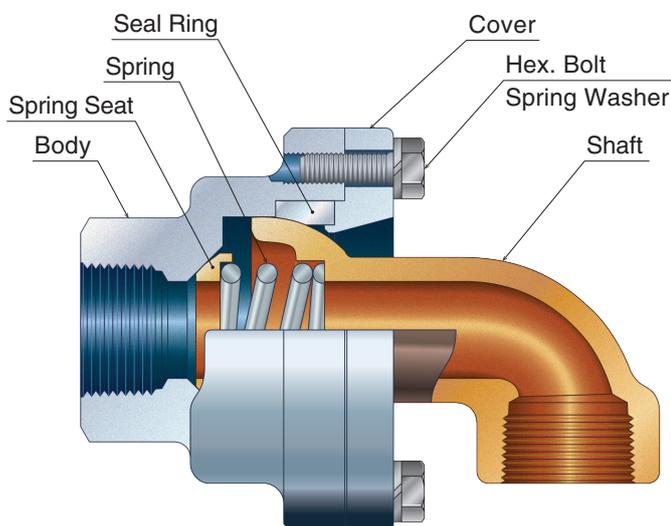


Style 4



Structures and Materials

PK



Materials of Main Components (Standard Specification)

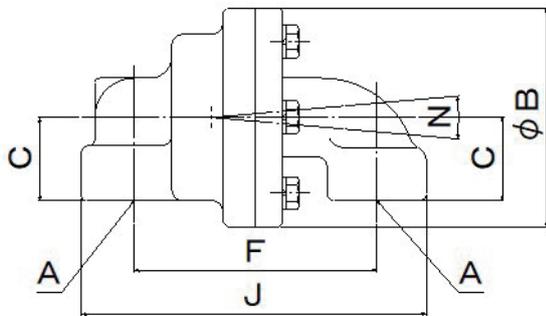
Part Name	Material
Shaft	Bronze
Body	Ductile Cast Iron Carbon Steel
Cover	Ductile Cast Iron
Seal Ring	PTFE

Heat-resistant paint is applied to external parts.

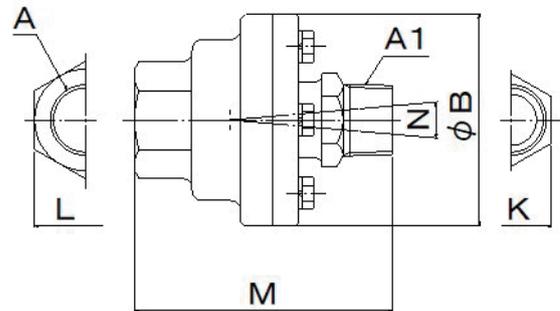
Note) Component materials are indicated on product drawings.
Contact our sales representative for requests for product drawings.

Dimensions (PK/PKX)

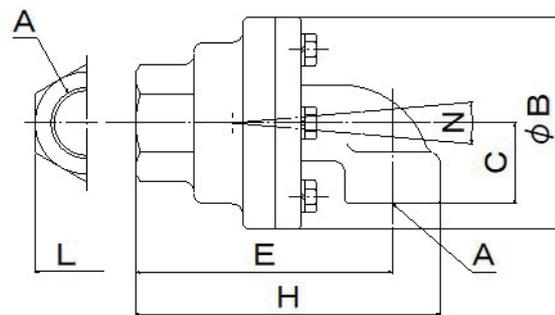
Style 1



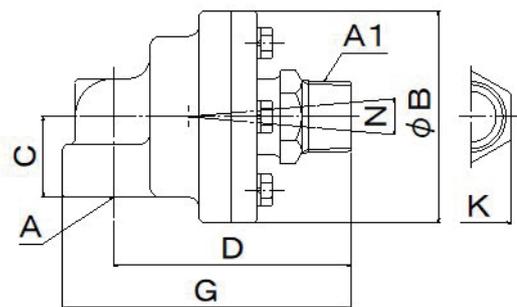
Style 2



Style 3



Style 4



PK Dimension Table

(mm)

Size	A	A1	B	C	D	E	F	G	H	J	K	L	M	N
15A	Rc1/2	R1/2	70	30	84	82	75	100	98	107	24	30	91	6°
20A	Rc3/4	R3/4	85	30	97	93	92	116	111	130	34	38	100	6°
25A	Rc1	R1	100	38	110	120	110	135	143	157	38	48	121	6°
32A	Rc1¼	R1¼	118	45	131	145	140	159	173	196	43	57	137	6°
40A	Rc1½	R1½	125	55	140	150	140	170	180	202	54	63	149	6°
50A	Rc2	R2	150	70	165	170	165	203	208	240	62	77	170	6°

PKX Dimension Table

(mm)

Size	A	A1	B	C	D	E	F	G	H	J	K	L	M	N
15A	Rc1/2	R1/2	70	30	84	82	75	100	98	106	24	30	91	6°
20A	Rc3/4	R3/4	85	30	100	94	94	119	113	132	34	38	100	6°
25A	Rc1	R1	100	38	108	120	107	132	143	154	38	48	121	6°
32A	Rc1¼	R1¼	118	45	121	136	130	149	164	186	43	57	127	6°
40A	Rc1½	R1½	125	55	137	142	130	168	173	192	54	63	149	6°

Note 1) K of 50A is the width across flats of an octagon.

2) L of 32A and 40A is the width across flats of an octagon, and L of 50A is the width across flats created on the round bar.

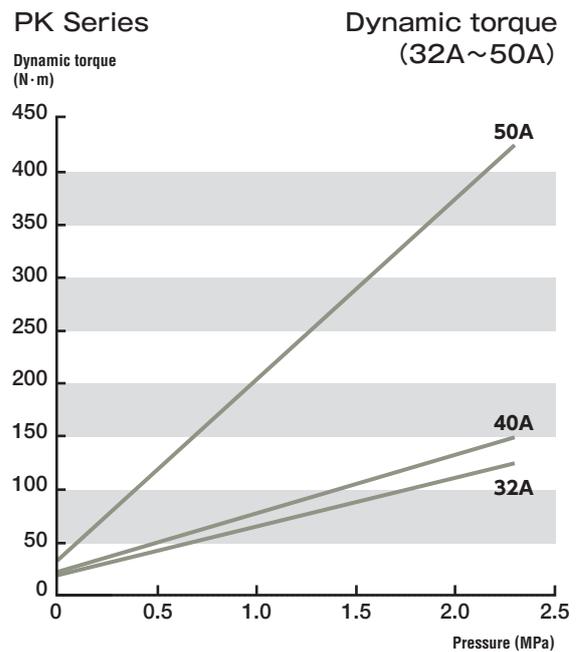
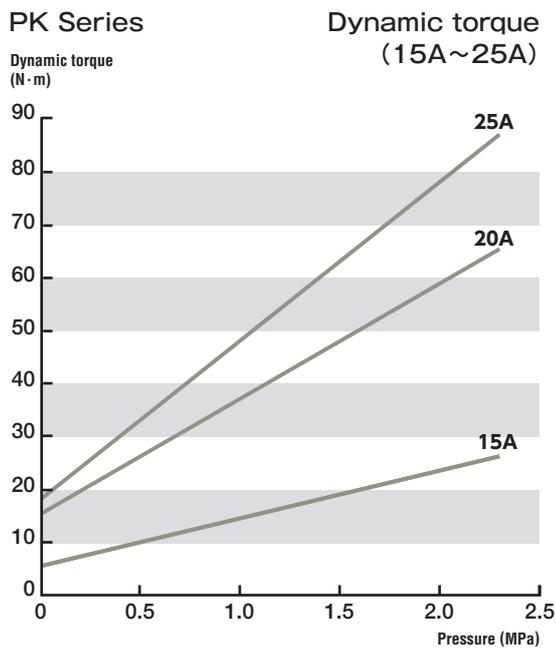
3) N is an allowable moving range (angle) of a shaft.

Masses

Masses of PK Series (kg)

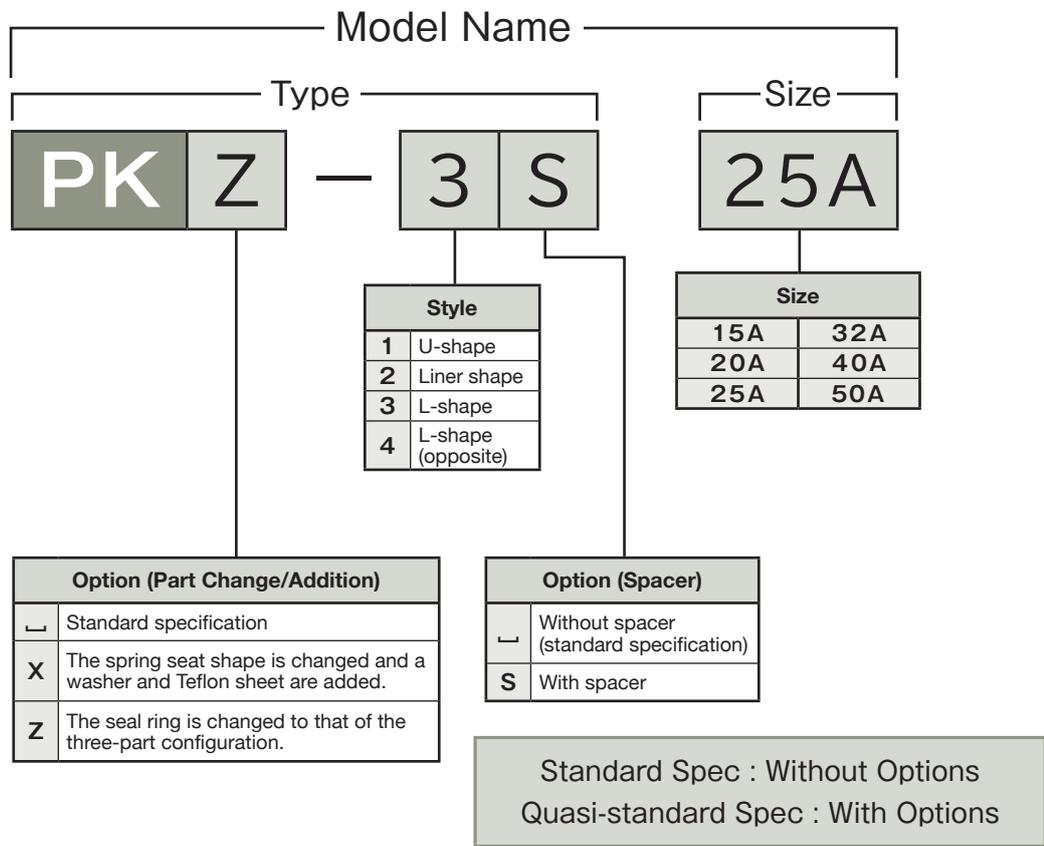
Size	Style			
	1	2	3	4
15A	1.1	1.0	1.0	1.0
20A	1.8	1.5	1.6	1.6
25A	2.8	2.4	2.6	2.5
32A	4.2	3.6	4.0	3.9
40A	5.2	4.8	4.9	5.0
50A	8.0	7.1	7.8	7.0

Dynamic Torque



- Note 1) Dynamic torque varies depending on product storage conditions, storage period, or fluid types.
 2) Starting torque is larger than dynamic torque. Although starting torque is even larger when wringing occurs, it does not indicate any fault.
 3) Data are typical values measured based on in-house test standards. They are not guaranteed values.

Model Names and Types



- Note 1) "└" indicates a space. A model name is indicated without spaces.
- 2) If two or more option (part change/addition) codes are selected, they are indicated in alphabetical order.
- 3) Option (part change/addition) code X is applicable to sizes 15A - 40A.
- If you have any questions, contact our sales representative.

Precautions on Selection

1. Select a product whose operating conditions are within the service conditions (listed in the table on page 2).
2. Although the shaft rotates 360° in the swivel direction, the upper limit of its self-aligning angle is 6° ($\pm 3^\circ$).
When introducing a hose for connecting the product or a movable pipeline for using multiple products, carefully consider the motion of the hose and the movable pipeline before selecting a style.
3. Select an option as necessary.
 - 1) See “Model Names and Types” (page 5) for the types of options.
 - 2) If heating and cooling are alternately carried out, select option (part change/addition) code Z.
 - 3) To limit the self-aligning function, select option (spacer) code S.
4. The use of the product in a continuous rotation condition is not appropriate. The product lifetime becomes shortened.
5. The product is structured so that a shaft and a seal ring closely contact with each other due to fluid pressure and a spring, in order to seal fluid. Therefore, applying excessive load in the direction of pushing the shaft towards the body reduces the seal face pressure and opens the seal face, easily causing fluid leakage.
6. The product cannot be used for fluid that causes corrosion on it.
7. The product is not designed according to the general design rules for safety and hygiene of food processing machinery (JIS B 9650). Consult with us when considering the use of the product in food-related facilities.
8. Depending on the fluid used, the product may subject to restrictions due to national laws or local regulations.

As for customized products, we can produce products with modifications that are not included in the options. If you have any questions or wish to purchase customized products, contact our sales representative.

Maintenance

1) Greasing

Greasing is not required for the PK series.

2) Replacement of consumables

You can use the product for an extended period of time by replacing consumables.

Contact us for replacement. We carry it out according to our repair program.

Depending on the products, expenses for purchasing new products may be lower than repair expenses.

Contact us for more information.

Product Order

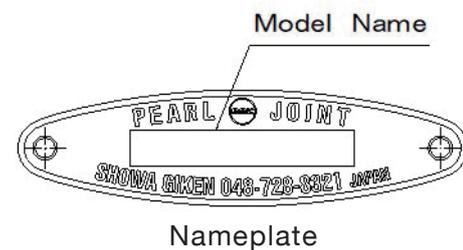
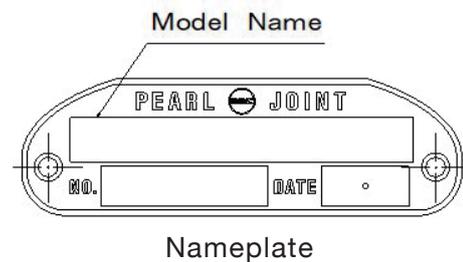
Please provide the following information.

1) When ordering our product you are currently using

- ① Model name (indicated on the product's nameplate)

2) When newly ordering our products

- ① Model name (see page 5.)
- ② Related information
 - The name of equipment to which our product is installed
 - The name of the fluid used
 - Fluid pressure and temperature
 - Operation (rotation or swivel) and its frequency
 - Service environment
 - Requests, etc.



(Products produced in or before February, 2020.)

If you have any questions, contact our sales representative.

Product Warranty

If a malfunction occurs during the warranty period, contact us or the distributor and send the product to us. Be sure to carefully pack the product for protection before sending it. After receiving the product, we will confirm the malfunction. If the malfunction was clearly caused by the materials of product components or the manufacturing method, we will repair the product in question or replace it with a new one free of charge.

Product Warranty Provision

1. Warranty Period

< New products >

One (1) year and six (6) months after shipment (from the manufacturing date) or one (1) year after installation, whichever comes first.

< Repaired products >

Six (6) months after shipment (from the manufacturing date).

2. We charge a fee for repairs in any of the following cases.

- ① Failure after the warranty period has expired
- ② Failure caused by use of the product deviating from the service conditions
- ③ Failure caused by misuse (improper storage, installation, pipe laying, operation or maintenance, etc.)
- ④ Failure caused by fluid contaminants or foreign objects in the fluid
- ⑤ Failure caused by relocation, transport, or falling of the product after delivery
- ⑥ Failure caused by disassembly, repair, or modification done by personnel other than our service personnel
- ⑦ Failure of the product attributed to using materials or according to standards specified by the customer
- ⑧ Failure of the product attributed to using materials provided by the customer
- ⑨ Failure caused due to unavoidable acts of nature such as fires or other natural disasters

3. Scope of Responsibility

Our responsibility shall be limited to repairs, replacements, or transport expenses covered by this product warranty provision. Expenses or damages caused by said failures above shall not be covered.

4. Applicable Regions

This product warranty provision shall be applicable to products installed in Japan.
Contact our sales representative if you install and use our products outside Japan.

5. Another Agreement

If another product warranty agreement is made separately with us and clearly states that said agreement shall have priority over this product warranty provision, this provision shall not be applicable.

6. This product warranty provision shall not restrict the customer's legal rights.

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