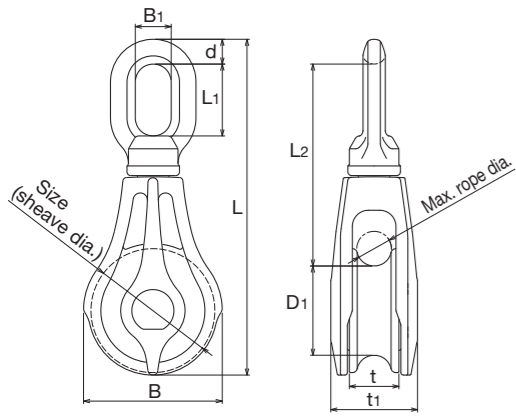


AK Block Type PB, Single Sheave



[With Steel Bearing]

Model	Size (sheave dia.) (mm)	Max. rope dia. (mm)	Dimensions (mm)									Bearing number	Unit weight (kg)	Working load limit (kg)
			d	L	L ₁	L ₂	D ₁	B	B ₁	t	t ₁			
AK1680	50	14	10	136	29	82	36	56	14	20	35	6000	0.5	400
AK1681	75	16	14.5	194	38	111	59	81	19	24	44	6002	1.3	600
AK1682	100	22	16	243	44	137	78	106	22	28	50	6203	2.5	1,000

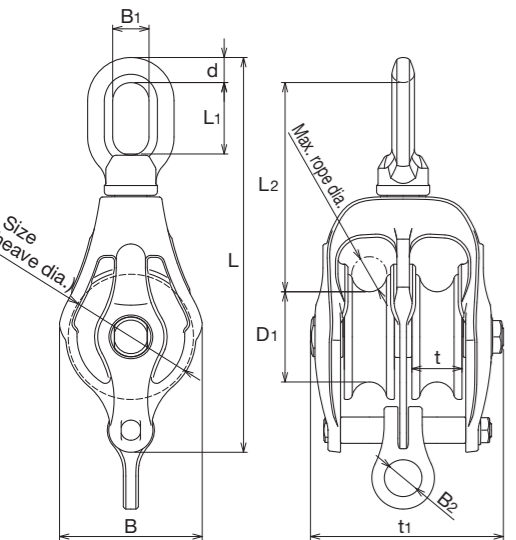
Material : Body = SCS14 (equivalent to SUS316) , Sheave = Special stainless steel , Swivel / Sheave pin / Nut = SUS304 , Bearing = Steel

[With Stainless Steel Bearing]

Model	Size (sheave dia.) (mm)	Max. rope dia. (mm)	Dimensions (mm)									Bearing number	Unit weight (kg)	Working load limit (kg)
			d	L	L ₁	L ₂	D ₁	B	B ₁	t	t ₁			
AK10300	50	14	10	136	29	82	36	56	14	20	35	6000	0.5	400
AK10301	75	16	14.5	194	38	111	59	81	19	24	44	6002	1.3	600
AK10302	100	22	16	243	44	137	78	106	22	28	50	6203	2.5	1,000

Material : Body = SCS14 (equivalent to SUS316) , Sheave = Special stainless steel , Swivel / Sheave pin / Nut = SUS304 , Bearing = SUS440C

AK Block Type PB, Double Sheaves

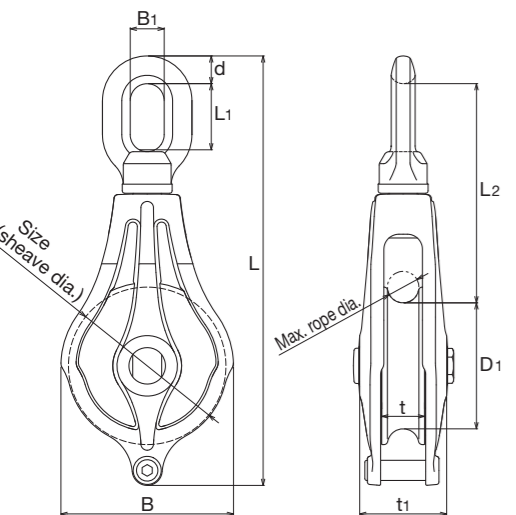


[With Stainless Steel Bearing]

Model	Size (sheave dia.) (mm)	Max. rope dia. (mm)	Dimensions (mm)									Bearing number	Unit weight (kg)	Working load limit (kg)
			d	L	L ₁	L ₂	D ₁	B	B ₁	t	t ₁			
AK10310	50	14	10	158	29	83.5	36	57	14.5	20	77	6000	0.95	400
AK10311	75	16	14.5	229	38	117	59	84	19	24	94	6002	2.2	600
AK10312	100	22	16	282	44	142	78	109	22	28	111	6203	4.0	1,000

Material : Body / Sheave / Becket / Nut = Special stainless steel , Swivel / Sheave pin / Becket pin / Collar = SUS304 , Bearing = SUS440C

AK Block Type PB-II, Single Sheave



[With Steel Bearing]

Model	Size (sheave dia.) (mm)	Max. rope dia. (mm)	Dimensions (mm)									Bearing number	Unit weight (kg)	Working load limit (t)
			d	L	L ₁	L ₂	D ₁	B	B ₁	t	t ₁			
AK10073	125	25	22	341	52	174	100	137	27	34	69	62/28	4.9	1.5

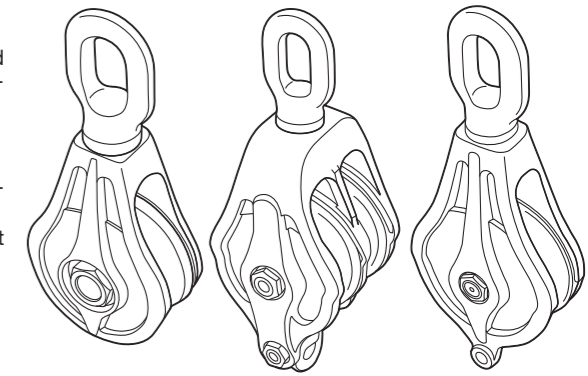
Material : Body / Sheave / Nut = Special stainless steel , Swivel / Sheave pin / Becket bolt / Collar = SUS304 , Bearing = Steel

Manufacturer **ASANO** Asano Metal Industry Co., Ltd.
 2866 Tsukioka, Sanjo, Niigata, 955-0803, JAPAN
 TEL +81-256-33-0101 FAX +81-256-33-0096
 Homepage <http://www.asano-metal.co.jp/en>
 E-mail info-english@asano-metal.co.jp

Dealer

Before use Important

- For proper and safe use of the product, the prevention of injury to yourself and others around you, and the prevention of damage to property, read and understand this document thoroughly before handling the product.
- After reading this document, store it in a place where it can be easily referenced.
- Have an expert plan and install equipment such as cranes that will be used with the product.
- Follow the industrial safety and health regulations and safety ordinance for cranes when handling the product.
- The product is manufactured for the purpose of hoisting or pulling heavy loads. Do not use it for any other purpose.
- The product is for professional use only. It is not for general home use.



Safety precautions

The descriptions in these "Safety precautions" and in the text are for you to follow in order to prevent injuries and property damage.

The danger and degree thereof resulting from incorrect handling are classified as follows.

Warning	Ignoring this indication and handling the product incorrectly may result in serious injury or death.	Caution	Ignoring this indication and handling the product incorrectly may result in minor injury or property damage.
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The following symbols are used to indicate the descriptions for you to follow.

	Describes something you must not do.		Describes something you must do.
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Warning

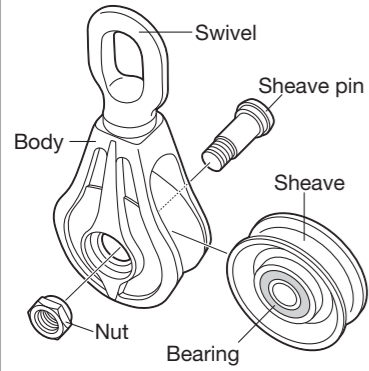
Do not use for the purpose of hoisting people or equipment with people in it. Doing so may lead to serious injury or a fatal accident.	Do not perform modifications such as welding or cutting. Doing so may lead to serious injury or a fatal accident due to a weakened or broken pulley.
Do not apply loads that exceed the working load limit. Doing so may damage the pulley, drop the hoisted load, and lead to serious injury or a fatal accident.	Inspect before use and periodically. Failure to do so will overlook abnormalities or damage to the pulley, and may lead to serious injury or a fatal accident.
Do not apply impact loads. Doing so may lead to serious injury or a fatal accident due to a broken pulley or other part, or falling hoisted loads.	Do not let the rope fixture touch the pulley. Doing so may damage the pulley and lead to an accident of a falling hoisted load.
Do not ride on top of hoisted loads or pulley equipment. Doing so may lead to serious injury or a fatal accident due to falls or falling hoisted loads.	Attach the hoisted load so that the sheave and hoisted load fixture are in tandem. If the load is applied to the pulley from the side, it may lead to serious injury or a fatal accident due to breakage.
Do not use when there are people within the movement range of the hoisted load or under the pulley. Doing so may lead to serious injury or a fatal accident.	After starting to hoist a load, check that the rope is in the groove of the sheave. Failure to do so may drop the hoisted load due to rope damage, and lead to serious injury or a fatal accident.
When hoisting, stay away from the pulley, rope, and around and under the hoisted load. Failure to do so may get your hands or body caught or you may get crushed under the falling hoisted load, lead to serious injury or a fatal accident.	Do not use during bad weather such as in strong winds. Doing so may drop the hoisted load and lead to serious injury or a fatal accident.
Do not use the swivel for purposes such as constant rotation. Doing so may damage the swivel, drop the hoisted load, and lead to serious injury or a fatal accident.	When attaching, removing, or transporting a pulley, use slip-resistant protective gloves and perform work in a stable place. Failure to do so may drop the pulley and lead to serious injury or a fatal accident.

Caution

Do not use while submerged such as in the sea or water. Doing so will lead severe rotation failure or strength deterioration due to adhesion of foreign matter or corrosion.	In low temperature environments, check that the sheave is not frozen before working. Failure to do so may damage the rope from rotation failure of the sheave due to freezing.
Do not let the pulley touch sharp objects or abrasive surfaces. Doing so will cause the pulley to weaken due to damage or abrasion.	In high temperature environments, lubricate periodically. In high temperature environments, depletion of lubricant is severe and if the lubricant dries up, it will cause the rotation failure of the sheave or the shaft.
Do not let the sheave rotate continuously at high speeds for long periods of time. Otherwise the bearing may abrade due to frictional heat, which may cause the rotation failure of the sheave.	Do not use or store in the following environments. · Places with extreme temperature changes · Places with corrosive or acidic gas Doing so will cause rotation failure or strength deterioration.
Use within the temperature range between -18°C and 66°C. Using outside of this temperature range will cause rotation failure or strength deterioration.	

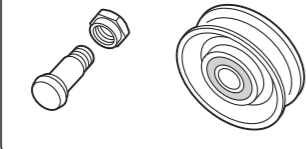
AK Block Type PB, Single Sheave (Size 50, 75, 100)

Part names

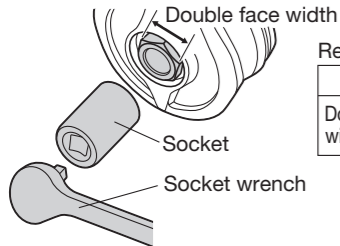


[Replacement parts]

- Sheave pin
- Sheave



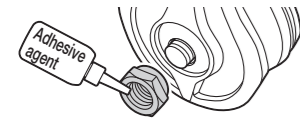
Removing and attaching the nut



Remove the nut using a socket wrench.

Size	50	75	100
Double face width of nut	14mm	22mm	24mm

When detaching the nut, and then attaching the nut again, apply adhesive agent to the screw of the nut.

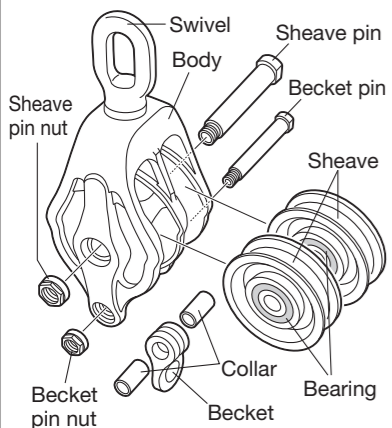


* Use adhesive agent that is sticky. (Loctite 271 is recommended)

Warning ! Be sure to apply adhesive agent. If adhesive agent is not applied, the nut will come off and the sheave will fall, leading to accident.

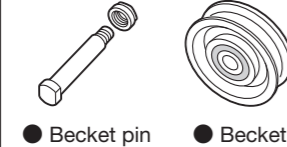
AK Block Type PB, Double Sheaves (Size 50, 75, 100)

Part names

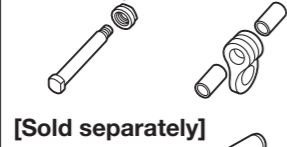


[Replacement parts]

- Sheave pin
- Sheave



- Becket pin
- Becket



[Sold separately]

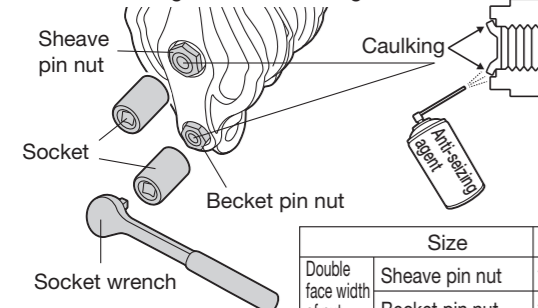
- Caulking jig

Removing and attaching the nut

- The sheave pin nut and the becket pin nut are subject to the caulking operation to prevent looseness.

<Removal>

- Apply anti-seizing agent to the caulking part so that the caulking will not be seized.
- Remove the sheave pin nut and the becket pin nut with a socket wrench together with caulking.



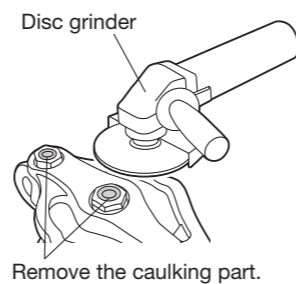
Size	50	75	100
Double face width of nut			
Sheave pin nut	13mm	18mm	22mm
Becket pin nut	10mm	16mm	18mm

- If the nut is unable to be removed in ②, scrape the caulking part with a disc grinder and remove it with a socket wrench.

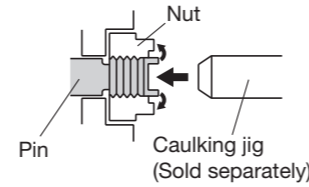
* Once removed sheave pin/sheave pin nut/becket pin/becket pin nut cannot be reused, so replace them with new ones.

<Attachment>

- Use new sheave pin/sheave pin nut/becket pin/becket pin nut, and tighten them with a socket wrench.
- Caulk so as to expand the tips of the sheave pin and becket pin.



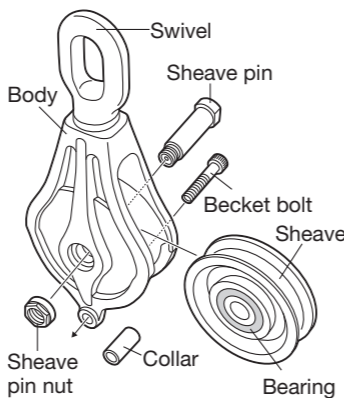
Remove the caulking part.



Warning ! Be sure to perform caulking operation. Also be sure to check that the nut does not become loose after performing caulking operation. If not fully caulked, the nut will come off and the sheave will fall and lead to accident.

AK Block Type PB-II (Size 125)

Part names



[Replacement parts]

- Sheave pin
- Sheave



- Becket



[Sold separately]

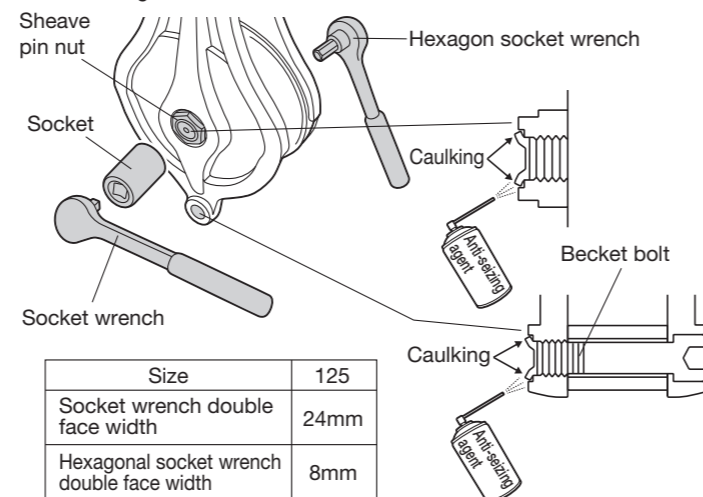
- Caulking jig

Removing and attaching the nut

- The sheave pin and the becket bolt are subject to the caulking operation to prevent looseness.

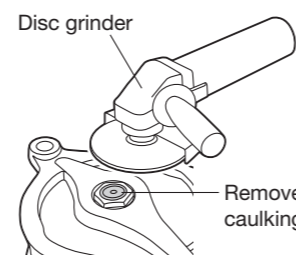
<Removal>

- Apply anti-seizing agent to the caulking part so that the caulking will not seize.
- Remove the sheave pin nut with a socket wrench together with caulking.



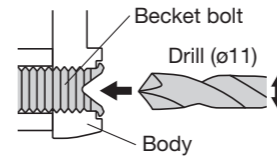
Size	125
Socket wrench double face width	24mm
Hexagonal socket wrench double face width	8mm

- If the nut is unable to be removed in ②, scrape the caulking part with a disc grinder and remove it with a socket wrench.



- Remove the becket bolt with a hexagon socket wrench together with caulking.

- If the becket bolt is unable to be removed in ④, scrape the caulking part with a drill (ø11mm) and remove it with a hexagon socket wrench.

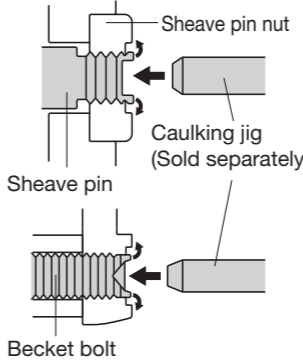


Caution ! Do not scrape the body. Since the body becomes unusable when it is scraped, do not scrape any more once the caulking part of the becket bolt is removed.

* Once removed sheave pin/sheave pin nut/becket bolt cannot be reused, so replace them with new ones.

<Attachment>

- Use new sheave pin/sheave pin nut/becket bolt, and tighten them with a hexagon wrench or socket wrench.



- Perform caulking operation so as to expand the tips of the sheave pin and the becket bolt.

Warning ! Be sure to perform caulking operation. Also be sure to check that the nut and bolt do not become loose after performing caulking operation. If not fully caulked, the nut or bolt will come off and the sheave will fall, leading to accident.

Inspection and maintenance

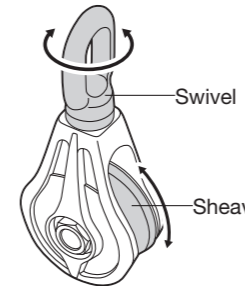
Inspection before use

Warning ! Inspect before using the pulley. Using the product when there is a problem accelerates the damage and may lead to strength deterioration, damage to the product, or an accident of falling hoisted load.

<Inspection of movable parts>

- The swivel and sheave rotate smoothly.

Caution ! If rotation is poor, not centered, significantly rattles, or if rotation stops, discontinue use and replace the part or product.

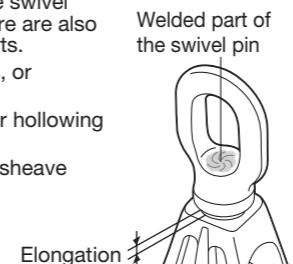


<Nut inspection>

- Nuts securing the sheave pin are not loose or defective.
- *For the checking method, refer to **Removing and attaching the nut.**

<Visual inspection of appearance>

- There are no cracks or corrosion in the swivel and welded part of the swivel pin. There are also no cracks or corrosion in the other parts.
- There are no bends, twists, distortions, or stretches.
- There is no excessive wear, denting, or hollowing out.
- There is no wire scratch marks on the sheave surface.
- Foreign matter or dirt is not attached.
- Casted characters on the body shall be readable.



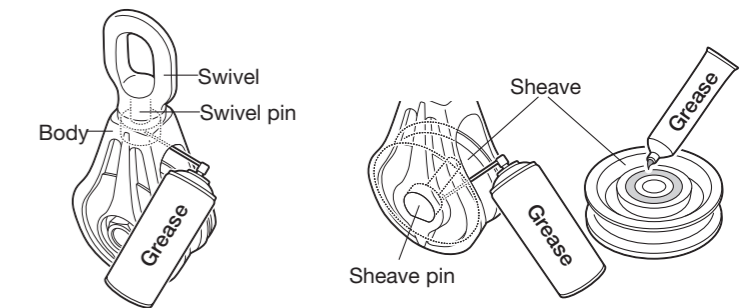
Warning ! Do not use products that are in the following conditions.
 - Products that are deformed, cracked, or worn out
 - Products with signs of corrosion such as rust stains or galvanic corrosion
 Doing so may lead to serious injury or a fatal accident due to falls or falling hoisted loads.

Caution ! Do not let the product touch other types of metal for long periods of time. Doing so will cause corrosion.

Maintenance

<Applying grease (or lubricant)>

- Applying to the swivel pin and the side surfaces of the sheave



Apply grease to the gap of the swivel pin in the inner side of the body to prevent the rotation failure and abrasion of the swivel.

In order to prevent water invasion into the bearing, apply grease to the bearings on the side of the sheave.

Warning ! Do not let grease on the swivel pin dry up. Drying up will lead to breakage of the swivel pin or the crack of the welded portion.

<Removing corrosion (rust), dirt, and foreign matter>

- For light dirt (such as hand marks, sand, or mud), wipe with a damp soft cloth or sponge, and then wipe with a neutral detergent.
- If dirt still remains, wiping with a store-bought cleaner (cleaning solution), remover, or thinner is effective.
- If rust stains (spots of rust caused by iron particles in dirt) remain after performing ① and ②, use a store-bought rust remover.
- If the rust cannot be removed with a store-bought rust remover, rub it off with sandpaper or an abrasive compound.
- Remove foreign matter by scraping it away with sharp-tipped object such as a slotted screwdriver, and then perform ① and ②. Rub off persistently attached foreign matter with a file or abrasive compound because you may damage the product if you use excessive force.

Caution ! Wipe frequently. Attached foreign matter such as sea water, soot, or iron particles will cause corrosion.

Periodic inspection

- Perform periodic inspection at least once a year.
- If you use the product under harsh conditions such as frequent hoisting of loads equal to the working load limit, impact loads, or intense rolling, perform inspection more frequently because the parts will wear out substantially.
- For periodic inspection, inspect all of the items in **Inspection before use**, perform **Maintenance**, and check the dimensions of each part. If the dimensions are 10% different from the original dimensions or the dimensions in the catalog, replace the part or product. (Refer to **Product specifications** for the dimensions.)

Warning ! When disassembling the pulley for sheave replacement, remove it from high places and disassemble on the ground. Failure to do so may drop the pulley and lead to serious injury or a fatal accident.

Caution ! When replacing parts, use ASANO-specified parts. Failure to do so may result in lower functionality of the pulley due to incompatible parts.

In case of trouble

- If a problem occurs while using the pulley, discontinue use immediately, and check the items in **Inspection and maintenance**.

Warning ! In the unlikely event the pulley deforms or breaks and a load is hanging in midair, first take down the hoisted load, unload the pulley, and take safety measures to prevent secondary disaster.

- For inquiries about pulleys, please consult the dealer where you purchased the product.