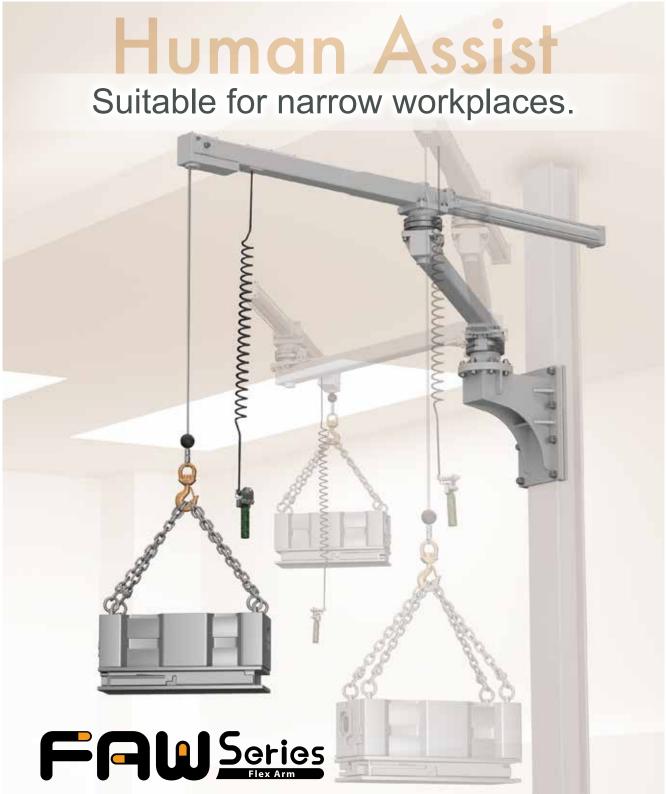


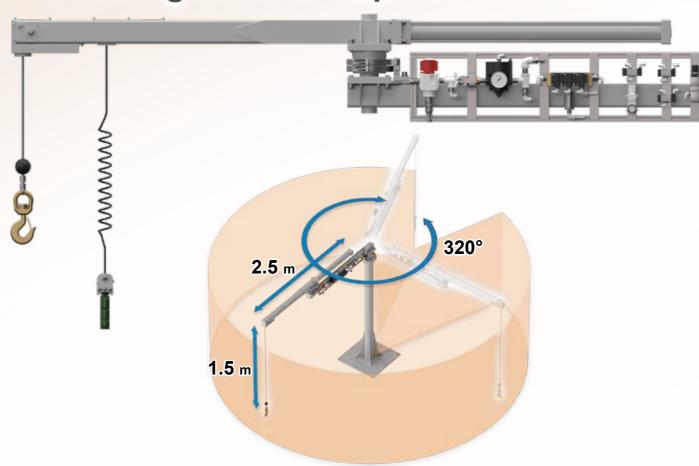
Flex Arm FAW Series





Human Assist

An assistive device that can be installed in low-ceiling areas to improve work



Simple

Simple transport of heavy objects

Using compressed air for the power, it is easy to work as if you are carrying heavy objects up to 50 kg by hand.

Wide

Wide movable range

Wide turning radius: **2.5** m, Vertical stroke: **1.5** m, enabling the machine to cover a wide working area.

Safety

All-air specifications

As power supply is not required, it can be used in atmospheres requiring explosion-proofing.

No-load sensing interlock

Interlocks are provided to prevent unclamping and suction OFF of heavy objects in mid-air during transport. *Depending on the attachment specifications, it may not be selected.



Flexibility

4 types of mounting systems

Selectable from floor-fixed, floor-mounted dolly, column-fixed, or ceiling-suspension fixed.

Automatically detects workpiece weights

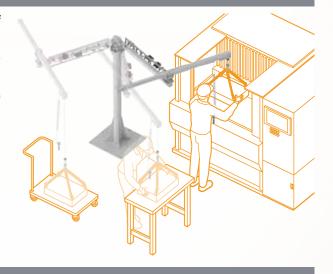
Enables easy balancing of multiple types of workpieces by automatically adjusting pressure.



Case Study

Hook

Supports a variety of workpiece shapes, making it possible to reduce the workload of attaching and removing workpieces to and from the processing machine, and transferring completed assemblies.



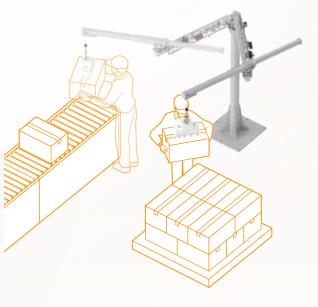
Installable in low-ceiling areas

As the total height is as low as 2.5 m, it can

be installed even in places with low ceilings.

Suction

Enables the reduction of the burden of handling work in cardboard box transport in shipping and receiving processes and in craft bag transport in food, molding and chemical processes.









Specifications

Item		FAW		
Bore size		ø63		
Working fluid		Compressed clean air		
Max. working pre	essure (*1) MPa	0.7		
Min. working pressure (*1) MPa		0.5		
Proof pressure (*1) MPa		1.05		
Ambient/fluid ter	nperatures °C	5 to 50		
Lubrication		Not available		
Mayabla ranga	Top and bottom mm	1,500		
Movable range	Horizontal (*2) mm	2,500		
Load capacity (0.5 MPa pressurized, *3) kg		50		
Air consumption (*4) L/min (ANR)		80		

^{*1:} Indicates supply pressure to the air supply unit (refer to page 7). If the supply pressure is insufficient, increase the pressure.

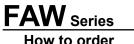
Weight

Model No.	Weight (kg)
FAW-F-63	265
FAW-C-63	695
FAW-W-63	155
FAW-U-63	110

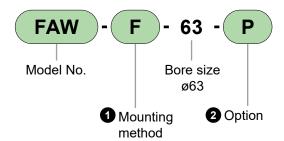
^{*2:} Max. rotation radius of arm. See the external dimensions for more information on the movable range.

^{*3:} Includes weight of attachments.

^{*4:} Values are at air consumption 2 pcs./min. and working pressure 0.5 MPa.



How to order



Mounting method

Mounting method				
Code		Description		
F	Floor mounted			
С	Floor fixing pallet			
w	Column mounted			
U	Ceiling mounted			

Ontion

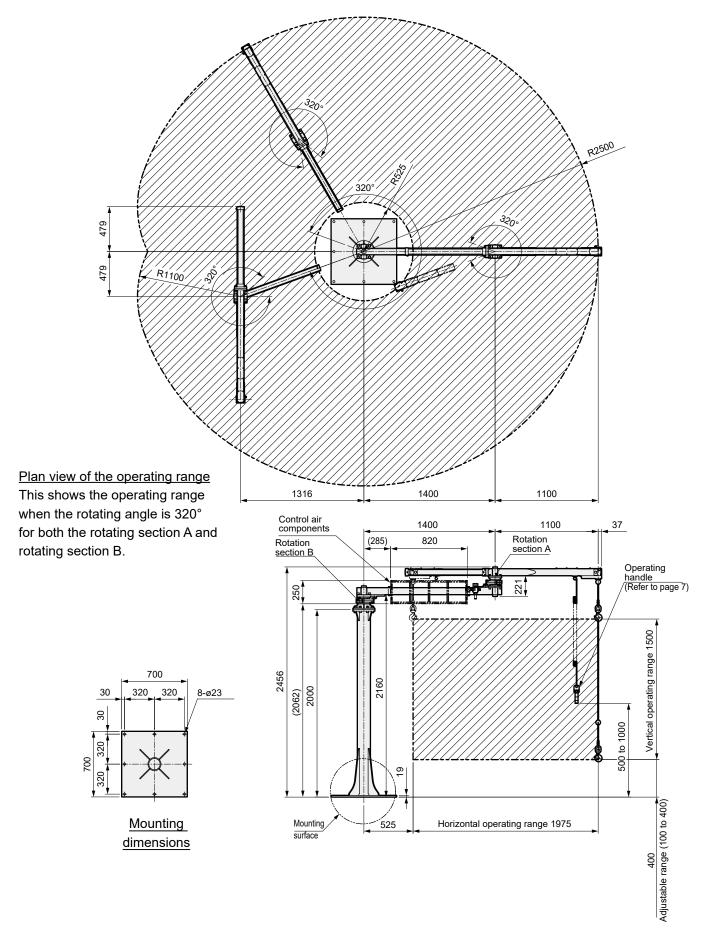
G Option			
Code	Description		
Blank	None		
Р	Air Panel		
s	Air stand		

- *1: Multiple selection is not possible.
 *2: The F.R.L. unit for primary pressure is included even without option.
- *3: The customer must prepare the piping from source air to the primary side of the F.R.L. unit and the coupler.
- *4: Option for mounting the air supply unit.

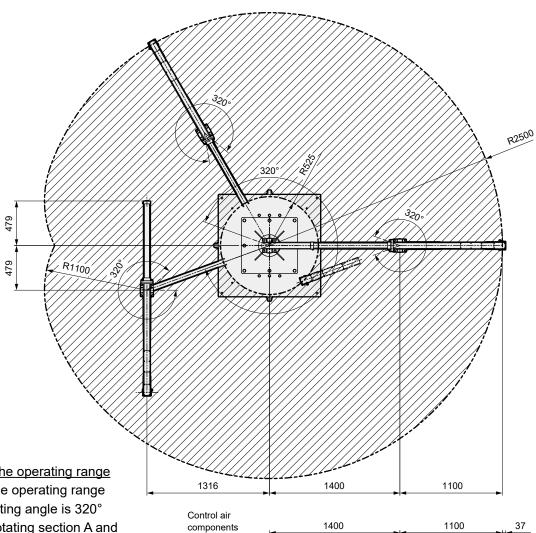
FAW Series

Dimensions diagram (floor-mounted)

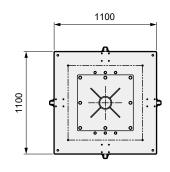
● FAW-F-63 (Vertical operating range: 1,500 mm / max. rotational radius: 2,500 mm)

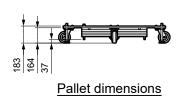


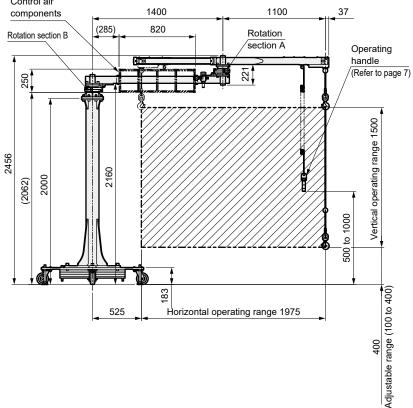
● FAW-C-63 (Vertical operating range: 1,500 mm / max. rotational radius: 2,500 mm)



Plan view of the operating range This shows the operating range when the rotating angle is 320° for both the rotating section A and rotating section B.



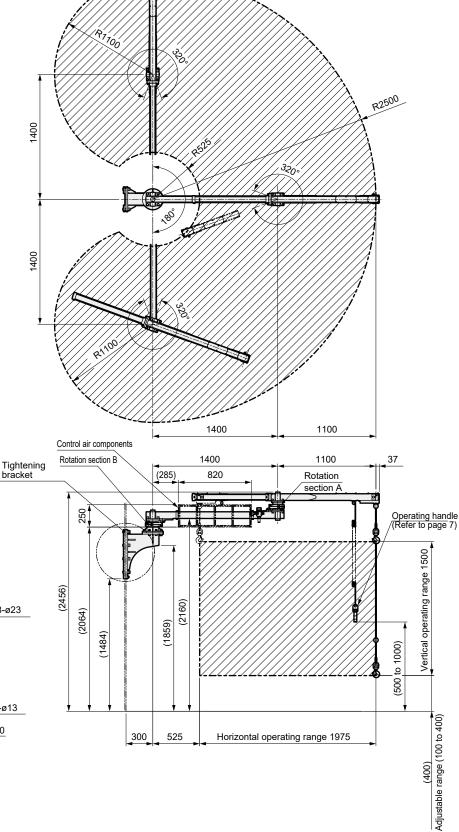




FAW Series

Dimensions diagram (column fixed)

● FAW-W-63 (Vertical operating range: 1,500mm / maximum rotational radius: 2,500mm)

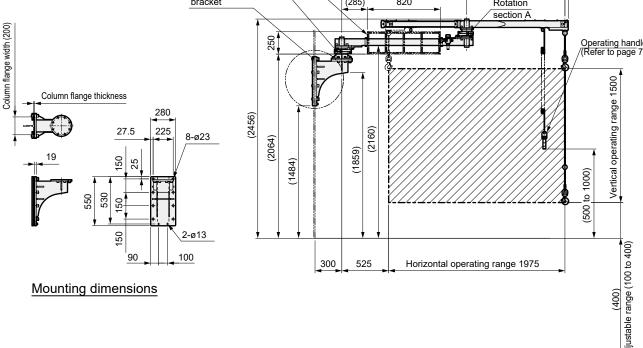


This shows the operating range when the rotational angle of the

Plan view of the operating range

rotation section A is restricted to 320° and the rotational angle of the rotation section B is restricted

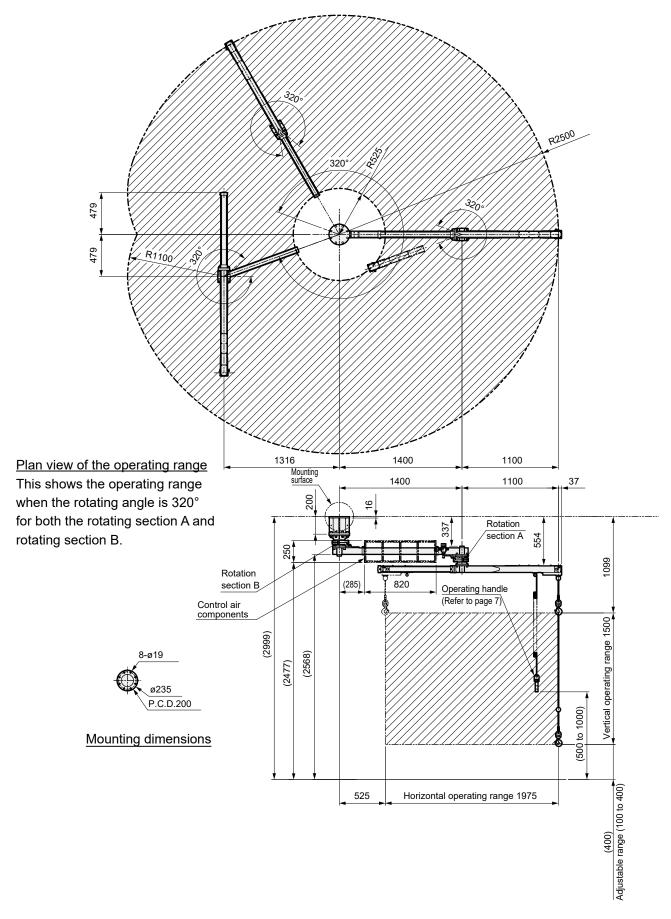
to 180°.





Dimensions diagram (fixed to ceiling mount)

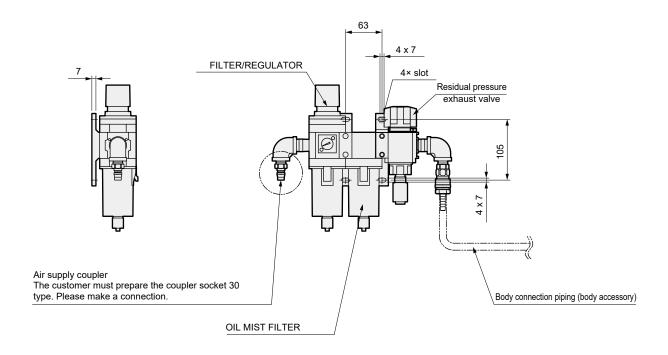
● FAW-U-63 (Vertical operating range: 1,500 mm / max. rotational radius: 2,500 mm)



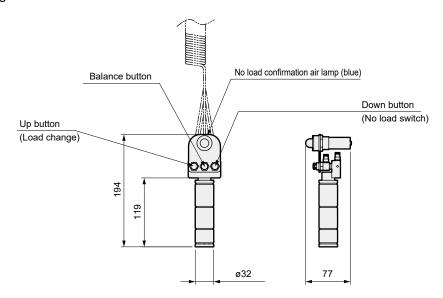
FAW Series

Dimensions diagram (air supply unit/operating handle)

Air supply unit



Operating handle

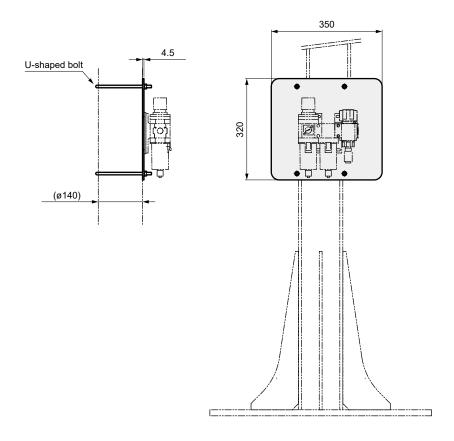


Operation mode:

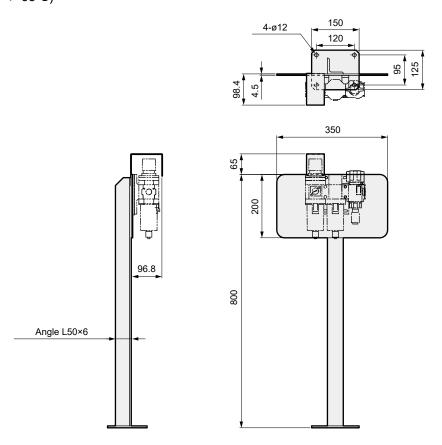
- 1. Catch the workpiece onto the hook.
- 2. Hold down the rise button until the workpiece floats. The no-load confirmation lamp turns OFF and the balance pressure for the weight of the workpiece is supplied.
- 3. Press the Balance button. Maintain balance pressure, and hold the workpiece when transporting.
- 4. Land the workpiece at the transported destination and press and hold the lowering button. The no load confirmation lamp turns ON to switch to the workpiece-less balance.
- 5. Remove the workpiece from the hook after confirming that the no load confirmation lamp is ON.

Optional dimensions

● Air panel (FAW-*-63-P)



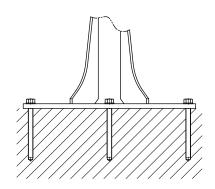
● Air stand (FAW-*-63-S)

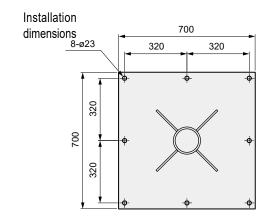




Mounting and Installation

Floor mounted fixed (FAW-F-63)

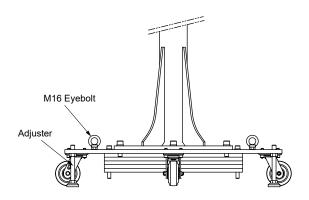


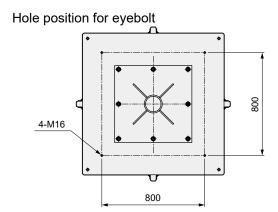


- Installation on existing concrete floor (concrete compressive strength 200 kg/cm or more, base thickness 200 mm or more) Use a chemical anchor (made by Asahi Kasei Corporation) when attaching the stopper.
- Refer to the table below for the chemical anchor types, anchor bar dimensions, and No. of units. For installation (drilling method) follow the chemical anchor instruction manual.

Chemical anchor types	Anchor bar dimensions	Qty.:
MU-20	W3/4 or M20	8

Floor fixing pallet (FAW-C-63)

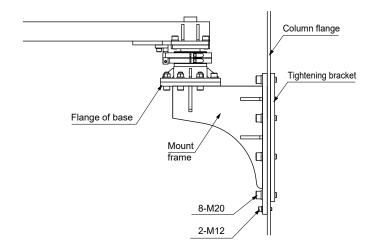




- When unloading the floor fixing pallet, lift it with M16 eyebolts × 4 pcs. The work should be performed by an operator having sufficient knowledge and experience.
- After adjusting with the adjuster, confirm that the top flange is horizontal.
- When the piston is not horizontal, readjust it with an adjuster.
 *If it cannot be adjusted completely, change the installation location.
- After installation, fix the product to the floor with angles, etc.

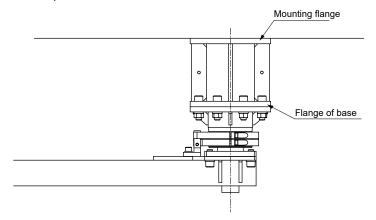
Mounting and Installation

Column fixing (FAW-W-63)



- Column flange width must be 200 mm t13. Sandwich the flange between 8 M20 units and the fastening bracket. In addition, make two holes of ø13 on the column and directly fix the column and base with M12 bolt and nut.
- Confirm that the flange of the base is horizontal. If it is not horizontal, adjust with a shim plate.
 - **★**In the case where the flange width is 200 mm or more, make a hole in the column and fix it with the M20 bolt nut.
 - *The column strength must be checked. Contact CKD if you have any questions.

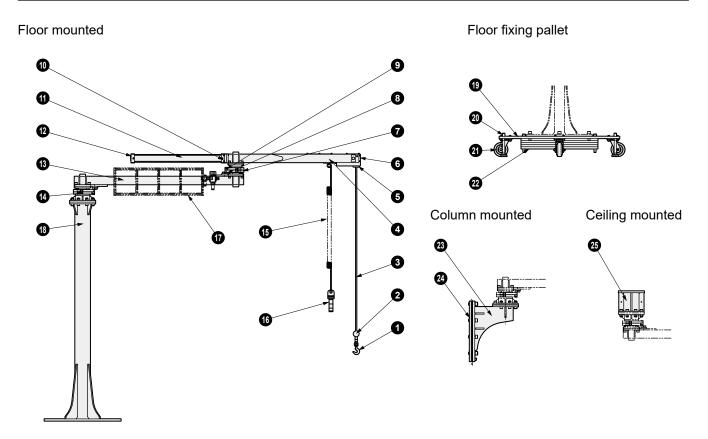
Ceiling mount fixed (FAW-U-63)



- Eight mounting flanges are available for P.C.D200 outer diameter ø235, ø19. Fix the flange with 8 x M16 screws.
- · Check that the flange of the base is horizontal.
- If it is not horizontal, adjust with a shim plate.
 - *Ceiling strength must be checked. Contact CKD if you have any questions.

FAW Series

Material / Treatment



No.	Product name	Pa	art name	Material	Surface-treated
1		Hook		Steel	Painted
2		Stopper ball		Nylon	
3		Rope		Nylon	
4		Secondary arm		Steel	Painted
5		Rope guide		MC nylon	
6		Cover		Steel	Painted
7			Stopper ring	Steel	
8		Rotor	Stopper block	Steel	
9			Cushion rubber	Polyurethane	
10			Rod side bracket	Aluminum alloy	
11	Body	Cylinder	Cylinder body	Aluminum alloy	Alumite treatment
12			Head side bracket	Aluminum alloy	
13		Primary arm		Steel	Painted
14		Rotor		Refer to No. 7 to 9	
15		Coil tube		Nylon	
		Operation handle	Handle	Rubber	
16			Operation button	Steel	
			Lamp	Plastic	
				Steel	Painted
17		Control panel		Aluminum alloy	Alumite treatment
				Contact CKD for details or	Contact CKD for details on air components
18	Floor mounted	Mount frame		Steel	Painted
19		Pallet body		Steel	Painted
20	Floor fixing pallet	Adjuster pad		Steel	Trivalent chromate
21		Caster		Steel	
22		Counter weight		Steel	
23	Column fixing	Mount frame		Steel	Painted
24	mount	Tightening bracket		Steel	Painted
25	Ceiling mount	Mount frame		Steel	Painted

Regular maintenance parts

The replacement should be performed by an operator having sufficient knowledge and experience. Be sure to read the instruction manual carefully.

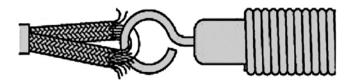
Part name	Recommended product	Standard replacement time *1, *2	
Cushion rubber	FAW-63-CR-KIT	20,000 cycles or one year	
Rope	FAW-63-R-KIT	100,000 cycles or 5 years * 3	
Tube	Soft nylon tube (CKD)	100,000 cycles or 5 years	

^{*1:} As this differs depending on the frequency of use and working conditions, it is not a guaranteed value.

1. When part of the rope has been unfastened



2. When a cut occurs at the rope and bracket connection section



3. When the rope diameter becomes ø9 mm

^{*2:} Guideline frequency calculated in 80 cycles/day (vertical reciprocating operation) × 240 days.

^{*3:} Even if the service life is less than the standard replacement time, replace the filter if the following conditions are met.



Safety Precautions

Be sure to read this section before use.

When designing and manufacturing a device using CKD products, the manufacturer is obligated to check that device safety mechanism, pneumatic control circuit, or water control circuit and the system operated by electrical control that controls the devices is secured.

It is important to select, use, handle and maintain the product appropriately to ensure that the CKD product is used safely. Observe warnings and precautions to ensure device safety.

Check that device safety is ensured, and manufacture a safe device.



WARNING

- 1 This product is designed and manufactured as a general industrial machine part. It must be handled by an operator having sufficient knowledge and experience.
- 2 Use this product in accordance with specifications.

This product must be used within its stated specifications. In addition, never modify or additionally machine this product. This product is intended for use in general industrial machinery equipment or parts. It is not intended for use outdoors (except for products with outdoor specifications) or for use under the following conditions or environments. (Note that this product can be used when CKD is consulted prior to its usage and the customer consents to CKD product specifications. The customer should provide safety measures to avoid danger in the event of problems.)

- 1 Use for applications requiring safety, including nuclear energy, railways, aircraft, marine vessels, vehicles, medical devices, devices or applications in contact with beverages or foodstuffs, amusement devices, emergency cutoff circuits, press machines, brake circuits, or safety devices or applications.
- Use for applications where life or assets could be significantly affected, and special safety measures are required.
- 3 Observe organization standards and regulations, etc., related to the safety of device design and control, etc. ISO4414, JIS B 8370 (Pneumatics fluid power - General rules and safety requirements for systems and their components) JFPS2008 (Principles for pneumatic cylinder selection and use) Including the High Pressure Gas Safety Act, Industrial Safety and Health Act, other safety rules, organization standards and regulations, etc.
- 4 Do not handle, pipe, or remove devices before confirming safety.
 - Inspect and service the machine and devices after confirming safety of all systems related to this product.
 - 2 Note that there may be hot or charged sections even after operation is stopped.
 - 3 When inspecting or servicing the device, turn OFF the energy source (air supply or water supply), and turn OFF power to the facility. Discharge any compressed air from the system, and pay attention to possible water leakage and leakage of electricity.
 - When starting or restarting a machine or device that incorporates pneumatic components, make sure that the system safety, such as pop-out prevention measures, is secured.
- 5 Observe warnings and cautions in the following pages to prevent accidents.
- The precautions are ranked as "DANGER", "WARNING" and "CAUTION" in this section.



DANGER: When a dangerous situation may occur if handling is mistaken leading to fatal or serious injuries, and when there is a high degree of emergency to a warning.



WARNING: If handled incorrectly, a dangerous situation may occur, resulting in death or serious injury.



CAUTION: When a dangerous situation may occur if handling is mistaken leading to minor injuries or physical damage.

Note that some items described as "CAUTION" may lead to serious results depending on the situation. Every item provides important information and must be observed.

Warranty

1 Warranty period

The product specified herein is warranted for one (1) year from the date of delivery to the location specified by the customer.

2 Warranty coverage

If the product specified herein fails for reasons attributable to CKD within the warranty period specified above, CKD will promptly provide a replacement for the faulty product or a part thereof or repair the faulty product at one of CKD's facilities free of charge. However, following failures are excluded from this warranty:

- 1) Failure caused by handling or use of the product under conditions and in environments not conforming to those stated in the catalog, the Specifications, or the Instruction Manual.
- 2) Failure caused by use of the product exceeding its durability (cycles, distance, time, etc.) or caused by consumable parts.
- 3) Failure not caused by the product.
- 4) Failure caused by use not intended for the product.
- 5) Failure caused by modifications/alterations or repairs not carried out by CKD.
- 6) Failure caused by reasons unforeseen at the level of technology available at the time of delivery.
- 7) Failure caused by acts of nature and disasters beyond control of CKD.

The warranty stated herein covers only the delivered product itself. Any loss or damage induced by failure of the delivered product is excluded from this warranty.

Note: For details on the durability and consumable parts, contact your nearest CKD sales office.

3 Compatibility check

The customer is responsible for confirming the compatibility of CKD products with the customer's systems, machines



Design / Selection

WARNING

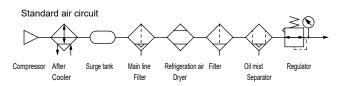
■ This product is a pneumatic aiding device designed to be used as a mechanical device with a jig, attachment, etc., mounted to the device's tip of the transport section. For use, be sure to implement a risk assessment for the machine overall, and confirm safety before use. In addition, the end user should conduct a risk assessment of the user side based on the residual risk information of the entire machine and determine a safe operation method before use.

CAUTION

- Do not disassemble, as it could impair the original performance and accuracy. For an overhaul, contact a CKD representative.
- Although a cushion rubber is mounted at the end of the rotating section to regulate the angle of rotation, hitting the arm against the cushion rubber with more force than necessary may result in damage to both sides. Do not use the arm in such a way as to cause it to collide with the end of the rotating section.
- Although the rope is strong enough, there is a risk of breaking due to rubbing or scratches. Refer to "Maintenance parts" for replacement.

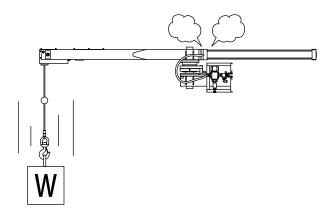
[Pneumatic source]

■ Prepare clean air ([standard air circuit] compressed air quality class: 1.5.1 to 1.6.1 equivalent) for the supply air.



[Pneumatic piping]

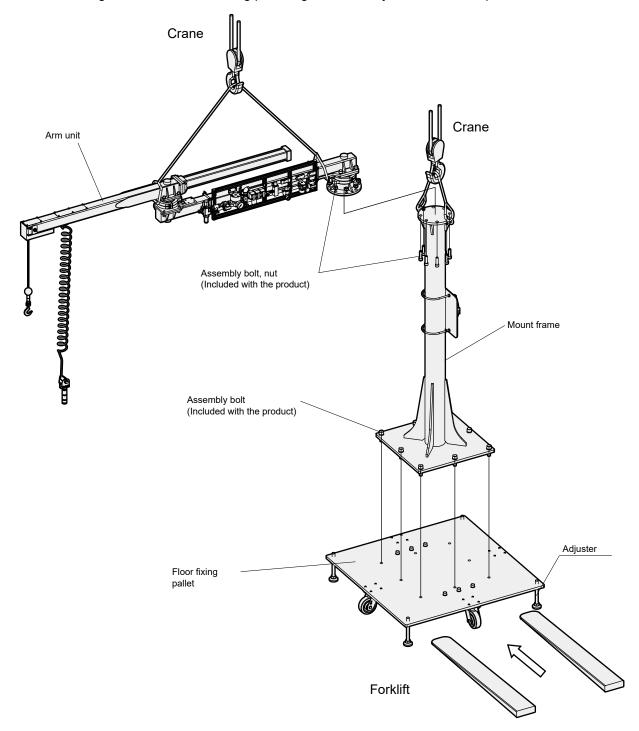
■ If the pneumatic piping is dislocated during use, the workpiece may fall, creating a hazard. Be sure to prevent the pneumatic piping from coming out. by connecting.



Installation / Transport

ACAUTION

- The arm unit, base, and floor fixing pallets shipped with this product will be delivered separately.
- A crane or a forklift is required that can handle the weight of the product when transporting, installing and assembling the product. Contact CKD if no crane or forklift is used.
- When transporting the floor fixing pallets with a forklift, make sure that the forklift claw does not interfere with the casters, adjuster, bottom surface weights.
- Mounting anchor bolt and floor fixing pallet fixing bracket are not attached. Customers are asked to prepare as necessary.
- When assembling the base and floor fixing pallets, ground the adjuster so that the pallets will not move.



Use / Maintenance

1. FAW Series

WARNING

- If vibrations, noise, or other abnormalities occur, first assure your own safety, and then stop the work. A fatal accident or total damage to the device may occur.
- Do not modify the product or device without the manufacturer's approval.
- Do not put hands or fingers into product or device gaps.
- When lifting a load at the tip of the device (including mounted attachments, jigs, etc.), do not hoist the load in such a way that it will be lopsided or uneven so as to tip over.
- Do not use air pressure or heavy objects outside the specifications, perform sudden operations, or tilt the unit up and down.
- If air is shut OFF while the tip of the device is raised, it will gradually fall over time. After use, be sure to remove any heavy objects and lower the tip to the lowest level.
- During work or transport operation, never move away from the product or device.
- Do not hang or climb onto the device. Otherwise, there is a risk of overturning or damage.
- If the air in the supply source or the piping such as a hose is dislocated while a heavy object is suspended, the heavy object will stop on the spot. However, if the heavy object is left in the suspended state, it will gradually fall.

A CAUTION

- For maintenance and inspection, remove any heavy objects with the air cut off.
- If you have any questions regarding handling, repair, or replacement parts, etc., contact your supplier.

2. FAW fixed to floor

WARNING

■ Refer to "Installation and installation" and insert the specified anchor.

3. FAW floor fixing pallet

- Use on a firmly paved, flat surface.
- Do not move the pallet with the transported item placed on the tip part (including mounted attachments and jigs, etc.).
- After installation, fix the floor and pallet at an angle, etc.

4. FAW column fixing

AWARNING

■ Fix to the specified pillar, referring to "Installation and installation".

5. FAW ceiling mount fixed

WARNING

■ Refer to "Mounting and Installation" to fix the unit in place.

FAW Order Sheet (Basic Specifications)

Date	
Sales office	

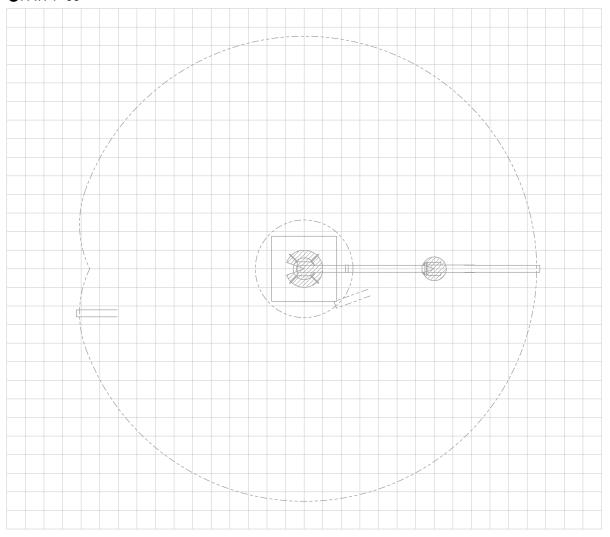
Address / A Contact 1. Enter details of work in progress and purpose of use for FAW. 2. Shape/weight/type of workpiece to be transported (1) Height H =mm	Company name			045	044
1. Enter details of work in progress and purpose of use for FAW. 2. Shape/weight/type of workpiece to be transported (1) Height H = mm (2) Width W = mm (3) Depth L = mm (4) Diameter g = mm (5) Weight kg (6) Type Type Examples of shape dimensions *For multiple workpieces, attach the shape dimensions of the workpiece are not for more than the shape dimensions of the workpiece are not form more than the shape dimensions of the workpiece are not form more than the shape dimensions of the workpiece are not form more than the shape dimensions of the workpiece are not form more than the shape dimensions of the workpiece are not form more than the shape dimensions of the workpiece are not form more than the shape dimensions of the workpiece are not form more than the shape dimensions of the workpiece are not forward. See that the shape dimensions dimensions of the workpieces, attach the shape dimensions of the work	Address /			 Office manager 	Contact
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Dolly

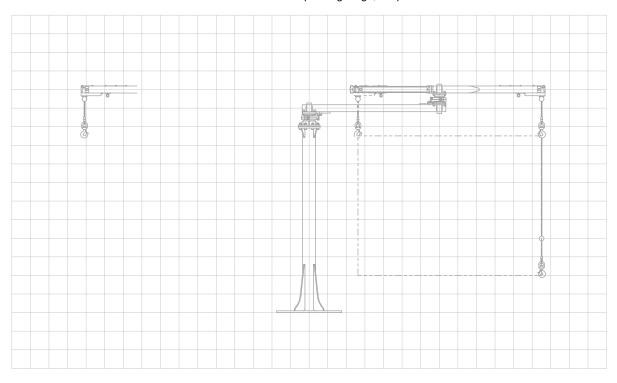
Conveyor

Flex Arm (Floor-mounted Fixed) Order Sheet (Work Layout Diagram)

●FAW-F-63

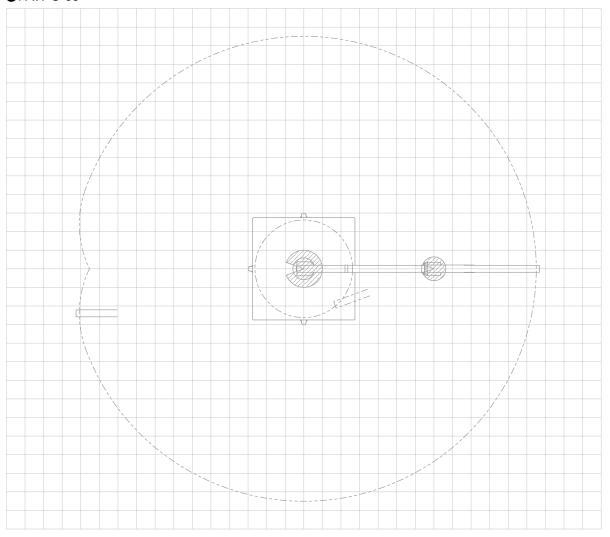


----- is the operating range, 1 square: 200×200 mm

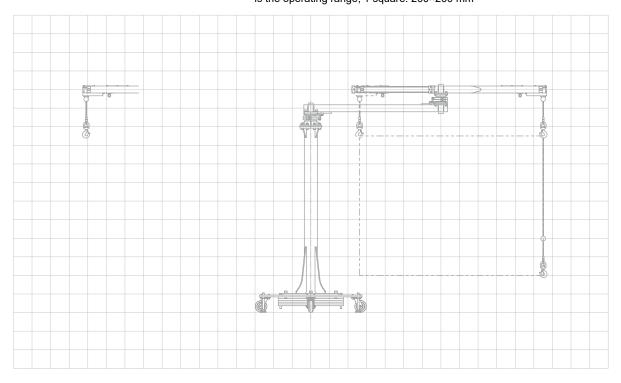


Flexible arm (floor fixing pallet) order sheet (work layout diagram)

●FAW-C-63

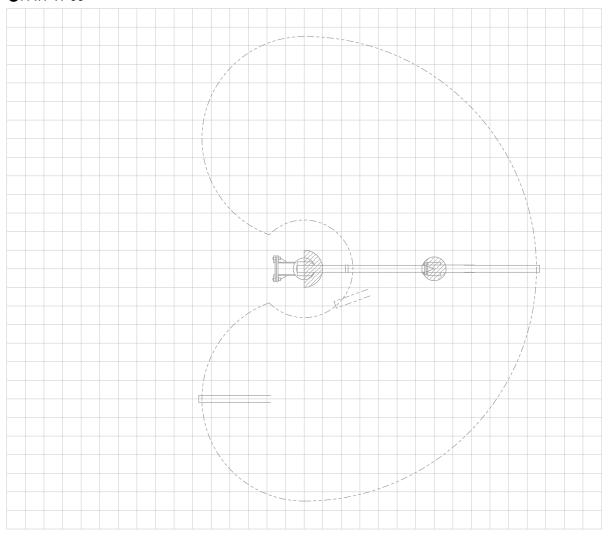


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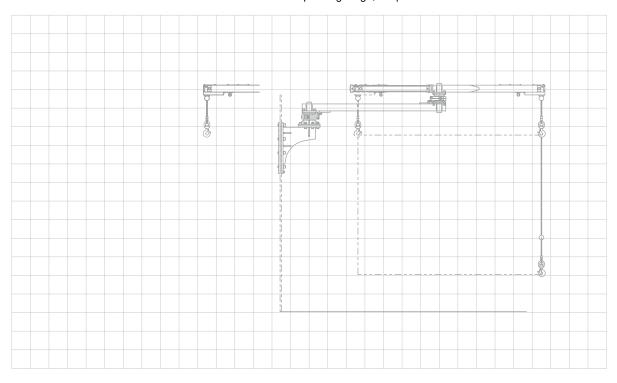


Flex Arm (Column fixed) Order Sheet (Work layout diagram)

●FAW-W-63

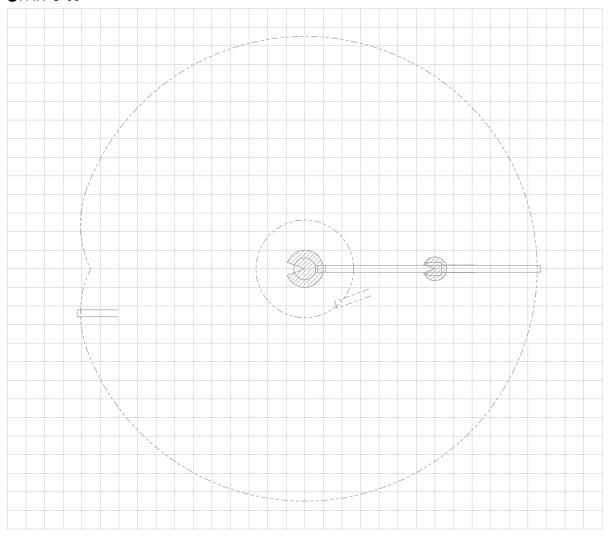


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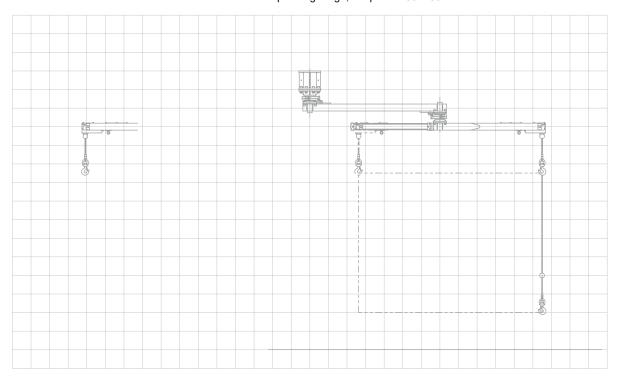


Flex arm (fixed to ceiling mount) Order sheet (work layout diagram)

●FAW-U-63



-----is the operating range, 1 square: 200×200 mm



MEMO

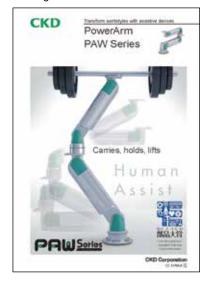
Related products

PowerArm PAW Series (Auxiliary mechanism)

Assistive devices based on the concept of solidarity with workers

- Select from 3 types of arms based on the workpiece load
- Supports a wider range of movement
- Wide range of motion to suit your application
- Position holding is possible during emergency stops
- Anti-snag
- Fold away for compact storage
- Customers can easily incorporate arms

Catalog No.CC-1418AA



[Palletizing specifications PAW-A*]

Space-saving and space-saving stacking and unloading work

- Specializing in stacking and unloading work
- Ensuring a wide movable area and user safety
- Space saving storage
- Simple combinations are possible



[Mechanical lock specifications PAW-*B]

Making transport work safer and easier

- Eliminates arm lifting and sinking
- Safety structure with built-in lock mechanism
- Vertical locking available for all strokes
- Manual lock can be released





Compact Arm CAW Series

Low friction cylinders and high rigidity guides realized Compact balancer that reduces arm and hand loads

- Wide for use and compact for storage
- Freely movable articulated arm
- Safety structure that suppresses vibration or reaction force
- Realizes light operability that can be used by anyone
- Two sizes available to match the tool load
- Anti-snag
- Can be mounted on aluminum frame with a mounting width of 60 mm

Catalog No.CC-1613A



Ultra-low friction balancing cylinder BBS Series

- With position locking mechanism for safety concerns (BBS-OU)
- Special packing and treatment for low friction sliding
- Compatible with lateral load as well (BBS-OS/OU-B)

Catalog No.CC-1212AA



Air supply unit ASU Series

Made-to-order product

- 2 types of flow rates (72 L/min, 25 L/min)
- Localized supply is enabled with easy installation.
- Filter, drain separator, dryer, etc., one unit (300 W only)
- Pressure source for emergency use (supports BCP)

Catalog No.CC-1284AA



WORLD-NETWORK



CKD Corporation

Website https://www.ckd.co.jp/en/

喜開理(上海)機器有限公司

HANGHAI)CORPORATION

- 喜開理(上海)機器有限公司
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 清南事務所(SHENYANG OFFICE)
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- Revision details Modify Dimensions diagram

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