

FREEBEAR



FREEBEAR[®]
CORPORATION

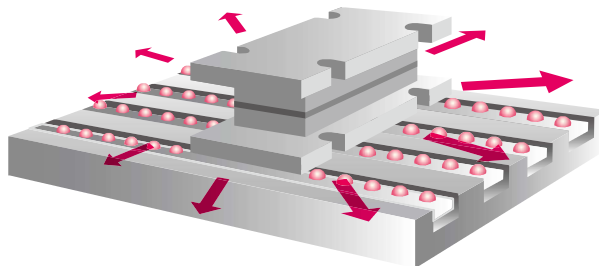
GENERAL CATALOG



What is freebear?

① Conveying by means of balls

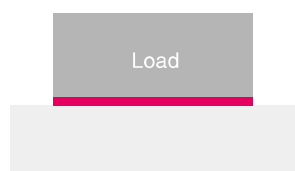
Roller conveyors can only move workpieces linearly, while freebears that use balls can move 360°.



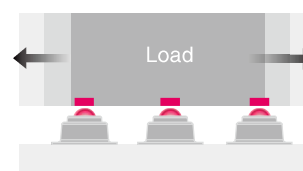
② Low starting frictional resistance

By using freebears, the friction on the load changes from "sliding friction" to "rolling friction", which can easily move the load.

(Starting frictional resistance refers to the initial resistance when moving a heavy object from rest.)



● When freebears are unused



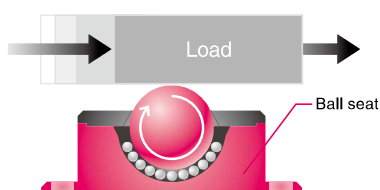
● When freebears are used

Freebear structure

① Upward and downward freebears

Upward type

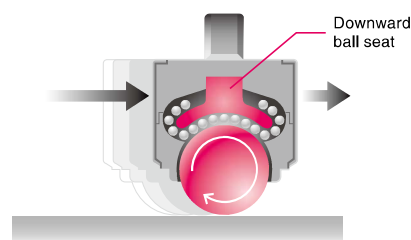
Put the small balls in the **ball seat**, and then put a main ball on them to rotate.



※Please consult us for your use in the oblique and horizontal directions.

Downward type

The downward **ball seat** is mounted inside, in which the small balls circulate.



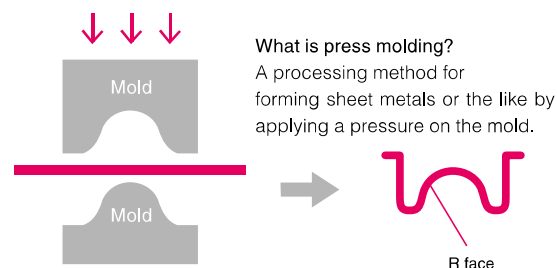
② Press-molded products, Cutting-machined products

【Press-molded products】

The ball seat is press-molded.
⇒ made from sheet metals.



● Example of press-molded product

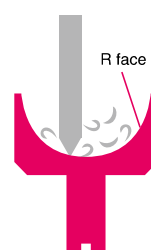


【Cutting-machined products】

The ball seat is cutting-machined.
⇒ made by cutting round bars.



● Example of cutting-machined product



From the above, the wall thickness of **R face** of press-molded product is relatively thin, while that of cutting-machined product is relatively thick.

※The weight of a single load for press-molded products shall not exceed 1,000 kg.

To bring out the maximum potential of freebears.

How to select a freebear

What is the allowable load of freebear, Maximum load?

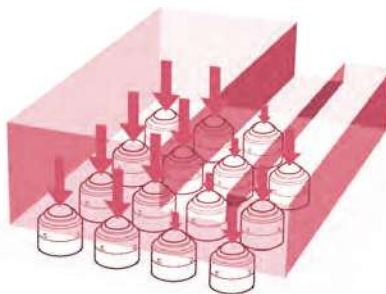
Allowable load

It refers to the maximum load which can be applied to a freebear with the starting frictional resistance (μ) keeping 3/100 or less when using a SS400-equivalent rigid body (the surface in contact with the freebear is made of polished soft material) as the load.

Maximum load

It refers to the maximum load which can be applied to a freebear with the starting frictional resistance (μ) keeping 3/100 or less when the material of load uses quenched and polished steel (SK3, HRc60 or above), the moving speed is 4 km/h or less, and the moving distance for workpiece positioning is short.

※As shown in the figure on the right, uneven load may result from the shape of the load and other reasons. In this case, the load to be applied to each freebear must be less than the allowable load.



Please set the mounting pitch according to the weight and size of the load.

The height of the freebear has a tolerance, and the bolster where the freebear is mounted and the conveying surface are not completely flat. Therefore, the load cannot be uniformly applied to all freebears mounted, and there may be uneven load on certain part. In such case, if the load on the freebear exceeds the allowable load, it may have a adverse effect on the starting frictional resistance and the service life.

For this reason, ●Cutting-machined products = Allowable load $\times$ 2/3
●Press-molded products = Allowable load $\times$ 1/2

Please determine the mounting pitch based on the load above. However, for freebears with spring, the restriction above is void since the freebear with uneven load is pressed down, which making more freebears enter the contact state.

The material of the load shall also be considered.

Table I is the measured results of the "starting frictional resistance (μ)" to the allowable load of each freebear on our test machine. On the test machine, the surface in contact with the ball is made of polished quenched steel (SK3, HRc60 or above).

Table I

	C-6H	C-8H	C-12H	C-8Y	C-12K
Test load (allowable load)	50kg	80kg	200kg	30kg	60kg
Starting frictional resistance (μ)	0.013	0.011	0.012	0.015	0.013

Besides, if the surface in contact with the balls is made of a different material, the starting frictional resistance measured may vary. From Table II, the starting frictional resistance (μ) of SS400 is more than twice of that of SK3; for the same SS material, the starting frictional resistance of mill scale material is more than that of polished one. Therefore, **to reduce the force moving a heavy object, the bottom of the load shall be made of a hard, smooth material.**

Table II C-8H (Allowable load 80kg)

Material Load	SK3 HRc60 or above Polished contact surface	SS400 Polished contact surface	SS400 Mill scale
80kg	0.92kg ($\mu=0.011$)	2.02kg ($\mu=0.025$)	2.22kg ($\mu=0.028$)

As shown in Table III, when the surface in contact with the ball is made of wood, generally $\mu=0.09\sim0.1$, which is about more than 3 times of that of SS400 mill scale material. Therefore, when conveying wood, the number of contacts shall be maximized to disperse the load. In addition, for easier conveying, please mount a steel plate onto the bottom of the load.

Table III C-8Y (Allowable load 30kg)

Material Load	Wood (pine)
30kg	2.7kg ($\mu=0.09$)

C-12K (Allowable load 60kg)

Material Load	Wood (pine)
60kg	5.4kg ($\mu=0.09$)

MF-type

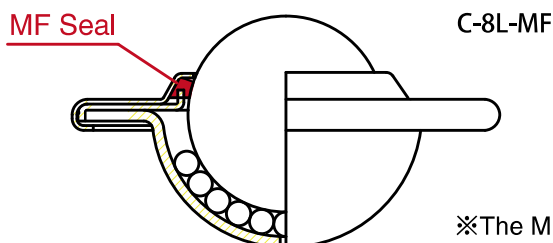
Press-molded products

RoHS

CAD

3D

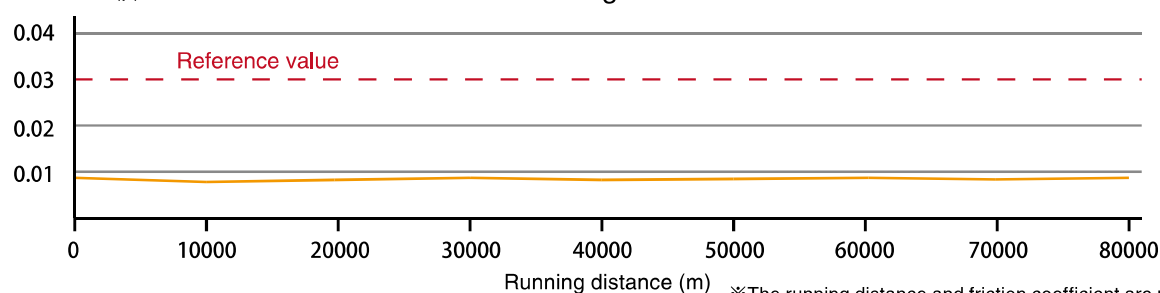
Since the seal is made of microfiber (MF seal), the frictional resistance is low, and the workpieces can be conveyed with the same friction coefficient (0.03 μ or less) as a freebear without seal. In addition, the MF seal can also adsorb the abrasion powder generated inside, thereby achieving a cleaning effect and prolonging the service life.



※The MF series is marked with "MF".

Friction coefficient (μ)

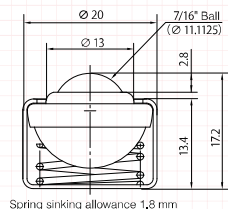
【Running test results】



※The running distance and friction coefficient are measured with a load of 30kg applied to the C-8Y-MF.

C-3S-MF

▲ Upward Steel Dust-proof

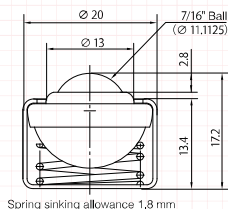


(Unit: mm)

Allowable load	49N(5kgf)	Main ball	SWRM	Spring	SWP
Mounting strength	49N(5kgf)	Small ball	SWRM	Outer cover	SPC
Max. strength	68N(7kgf)	Body (cover)	SPC	Seal	MF
Weight	17.6g	Ball seat	SPC		

S-3S-MF

▲ Upward Stainless steel Dust-proof

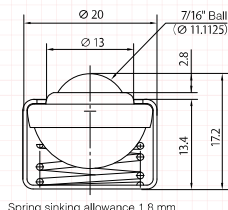


(Unit: mm)

Allowable load	49N(5kgf)	Main ball	SUS440C	Spring	SUS304
Mounting strength	49N(5kgf)	Small ball	SUS440C	Outer cover	SUS304
Max. strength	68N(7kgf)	Body (cover)	SUS304	Seal	MF
Weight	17.6g	Ball seat	SUS304		

P-3S-MF

▲ Upward Resin Dust-proof

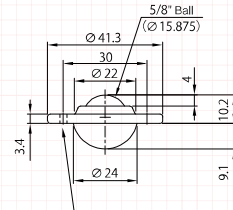


(Unit: mm)

Allowable load	9.8N(1kgf)	Main ball	Nylon	Spring	SWP
Mounting strength	9.8N(1kgf)	Small ball	SUS304	Outer cover	SPC
Max. strength	14.7N(1.5kgf)	Body (cover)	SPC	Seal	MF
Weight	12g	Ball seat	SPC		

C-5L-MF

▲ Upward Steel Dust-proof



(Unit: mm)

Allowable load	78.4N(8kgf)	Small ball	SWRM	Seal	MF
Max. load	156.8N(16kgf)	Body (cover)	SPC		
Weight	45.5g	Ball seat	SUS304		
Main ball	SWRM	Middle plate	SPC		

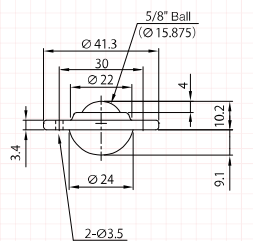
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S-5L-MF

▲ Upward Stainless steel Dust-proof

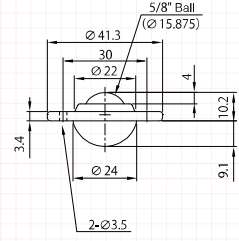


(Unit: mm)

Allowable load	78.4N(8kgf)	Small ball	SUS440C	Seal	MF
Max. load	156.8N(16kgf)	Body (cover)	SUS304		
Weight	45g	Ball seat	SUS304		
Main ball	SUS440C	Middle plate	SUS304		

P-5L-MF

▲ Upward Resin Dust-proof

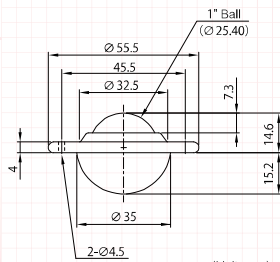


(Unit: mm)

Allowable load	19.6N(2kgf)	Body (cover)	SPC		
Weight	31.5g	Ball seat	SUS304		
Main ball	Nylon	Middle plate	SPC		
Small ball	SUS304	Seal	MF		

C-8L-MF

▲ Upward Steel Dust-proof

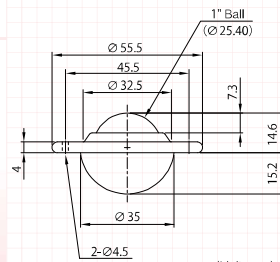


(Unit: mm)

Allowable load	294N(30kgf)	Small ball	SWRM	Seal	MF
Max. load	588N(60kgf)	Body (cover)	SPC		
Weight	132g	Ball seat	SUS304		
Main ball	SWRM	Middle plate	SPC		

S-8L-MF

▲ Upward Stainless steel Dust-proof

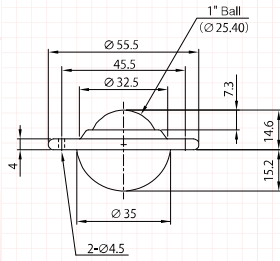


(Unit: mm)

Allowable load	294N(30kgf)	Small ball	SUS440C	Seal	MF
Max. load	588N(60kgf)	Body (cover)	SUS304		
Weight	131g	Ball seat	SUS304		
Main ball	SUS440C	Middle plate	SUS304		

P-8L-MF

▲ Upward Resin Dust-proof

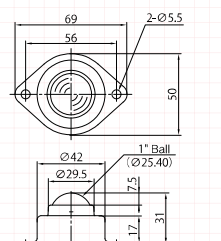


(Unit: mm)

Allowable load	49N(5kgf)	Body (cover)	SPC		
Weight	75g	Ball seat	SUS304		
Main ball	Nylon	Middle plate	SPC		
Small ball	SUS304	Seal	MF		

C-8Y-MF

▲ Upward Steel Dust-proof

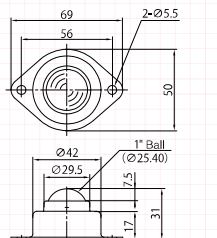


(Unit: mm)

Allowable load	294N(30kgf)	Small ball	SWRM		
Max. load	588N(60kgf)	Body (cover)	SPC		
Weight	138g	Ball seat	SUS304		
Main ball	SWRM	Seal	MF		

S-8Y-MF

▲ Upward Stainless steel Dust-proof

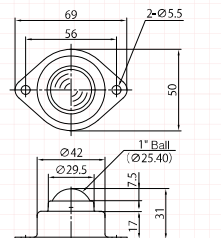


(Unit: mm)

Allowable load	294N(30kgf)	Small ball	SUS440C		
Max. load	588N(60kgf)	Body (cover)	SUS304		
Weight	134g	Ball seat	SUS304		
Main ball	SUS440C	Seal	MF		

P-8Y-MF

▲ Upward Resin Dust-proof



(Unit: mm)

Allowable load	49N(5kgf)	Body (cover)	SPC		
Weight	80g	Ball seat	SUS304		
Main ball	Nylon	Seal	MF		
Small ball	SUS304				

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Y-type

Press-molded products

RoHS

CAD

3D

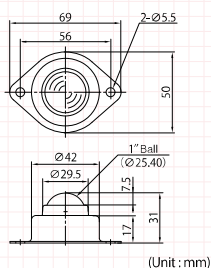
A synonym for "Ball Transfer". High quality products with wide application. Stainless steel ball seat further improves the performance.

※J-8Y is made of resin.

C-8Y-SL4

▲ Upward Steel

Product with scrap removing function



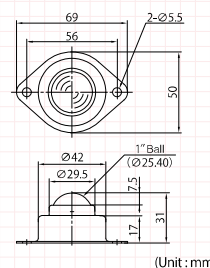
(Unit : mm)

Allowable load	294N(30kgf)	Small ball	SUJ2
Max. load	588N(60kgf)	Body (cover)	SPC
Weight	134g	Ball seat	SUS304
Main ball	SWRM		

S-8Y-SL4

▲ Upward Stainless steel

Product with scrap removing function

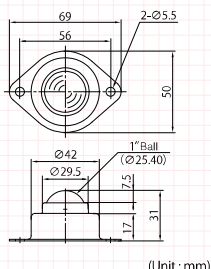


(Unit : mm)

Allowable load	294N(30kgf)	Small ball	SUS440C
Max. load	588N(60kgf)	Body (cover)	SUS304
Weight	138g	Ball seat	SUS304
Main ball	SUS440C		

C-8Y

▲ Upward Steel

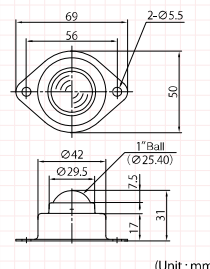


(Unit : mm)

Allowable load	294N(30kgf)	Small ball	SWRM
Max. load	588N(60kgf)	Body (cover)	SPC
Weight	138g	Ball seat	SUS304
Main ball	SWRM		

C-8Y-50kg

▲ Upward Steel

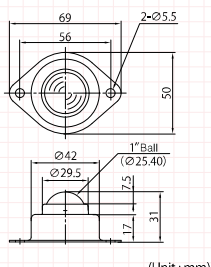


(Unit : mm)

Allowable load	490N(50kgf)	Small ball	SUJ2
Max. load	980N(100kgf)	Body (cover)	SPC
Weight	212g	Ball seat	SCM415
Main ball	SUJ2		

S-8Y

▲ Upward Stainless steel

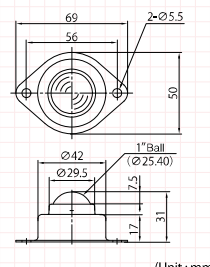


(Unit : mm)

Allowable load	294N(30kgf)	Small ball	SUS440C
Max. load	588N(60kgf)	Body (cover)	SUS304
Weight	134g	Ball seat	SUS304
Main ball	SUS440C		

P-8Y

▲ Upward Resin

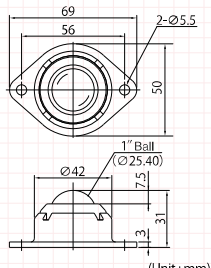


(Unit : mm)

Allowable load	49N(5kgf)	Body (cover)	SPC
Weight	79g	Ball seat	SUS304
Main ball	Nylon		
Small ball	SUS304		

J-8Y-WH

▲ Upward Resin

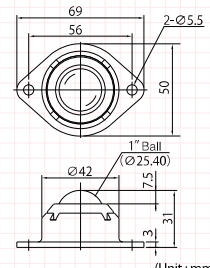


(Unit : mm)

Allowable load	98N(10kgf)	Body (cover)	POM
Weight	39g	Ball seat	POM
Main ball	POM		
Small ball	SUS304		

J-8Y-BK

▲ Upward Resin



(Unit : mm)

Allowable load	98N(10kgf)	Body (cover)	POM
Weight	39g	Ball seat	POM
Main ball	POM		
Small ball	SUS304		

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L-type

Press-molded products

RoHS

CAD

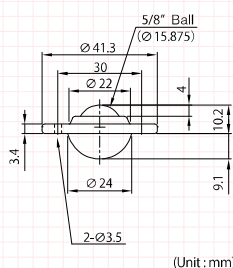
3D

Our wide range of products is suitable for various environments. And also suitable for purposes where mounting height needs to be reduced.

Single Freebear Product

C-5L

▲ Upward Steel

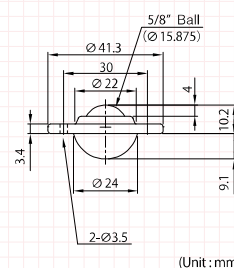


(Unit : mm)

Allowable load	78.4N(8kgf)	Small ball	SWRM		
Max. load	156.8N(16kgf)	Body (cover)	SPC		
Weight	45.5g	Ball seat	SUS304		
Main ball	SWRM	Middle plate	SPC		

S-5L

▲ Upward Stainless steel

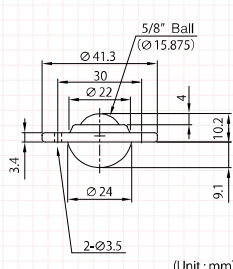


(Unit : mm)

Allowable load	78.4N(8kgf)	Small ball	SUS440C		
Max. load	156.8N(16kgf)	Body (cover)	SUS304		
Weight	45g	Ball seat	SUS304		
Main ball	SUS440C	Middle plate	SUS304		

P-5L

▲ Upward Resin



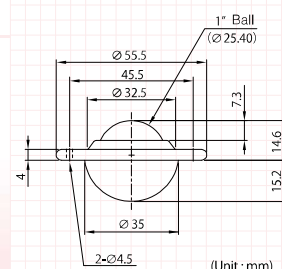
(Unit : mm)

Allowable load	19.6N(2kgf)	Body (cover)	SPC		
Weight	31.5g	Ball seat	SUS304		
Main ball	Nylon	Middle plate	SPC		
Small ball	SUS304				

C-8L-SL4

▲ Upward Steel

Product with scrap removing function



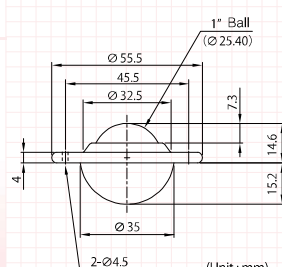
(Unit : mm)

Allowable load	294N(30kgf)	Small ball	SUJ2		
Max. load	588N(60kgf)	Body (cover)	SPC		
Weight	129g	Ball seat	SUS304		
Main ball	SWRM	Middle plate	SPC		

S-8L-SL4

▲ Upward Stainless steel

Product with scrap removing function

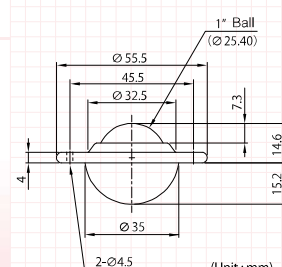


(Unit : mm)

Allowable load	294N(30kgf)	Small ball	SUS440C		
Max. load	588N(60kgf)	Body (cover)	SUS304		
Weight	127g	Ball seat	SUS304		
Main ball	SUS440C	Middle plate	SUS304		

C-8L

▲ Upward Steel

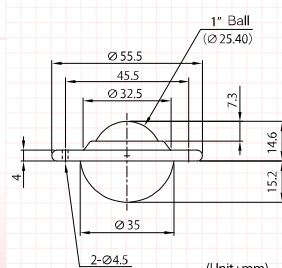


(Unit : mm)

Allowable load	294N(30kgf)	Small ball	SWRM		
Max. load	588N(60kgf)	Body (cover)	SPC		
Weight	132g	Ball seat	SUS304		
Main ball	SWRM	Middle plate	SPC		

S-8L

▲ Upward Stainless steel

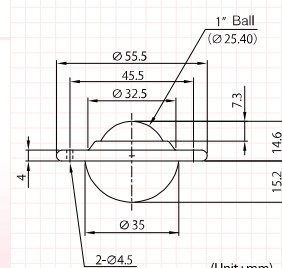


(Unit : mm)

Allowable load	294N(30kgf)	Small ball	SUS440C		
Max. load	588N(60kgf)	Body (cover)	SUS304		
Weight	131g	Ball seat	SUS304		
Main ball	SUS440C	Middle plate	SUS304		

P-8L

▲ Upward Resin



(Unit : mm)

Allowable load	49N(5kgf)	Body (cover)	SPC		
Weight	75g	Ball seat	SUS304		
Main ball	Nylon	Middle plate	SPC		
Small ball	SUS304				

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L-type

Press-molded products

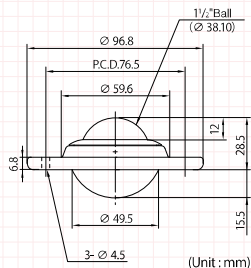
RoHS

CAD

3D

C-12 (with nylon seal)

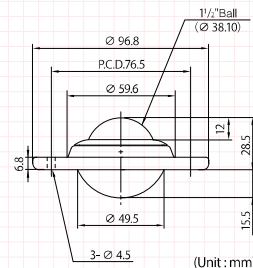
▲ Upward Steel Dust-proof



Allowable load	588N(60kgf)	Small ball	SUJ2
Max. load	1,176N(120kgf)	Body (cover)	SPC
Weight	506g	Ball seat	SPC
Main ball	SWRM	Seal material	Nylon

P-12 (with nylon seal)

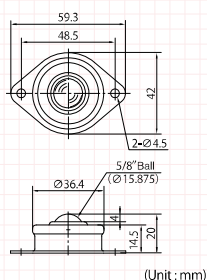
▲ Upward Resin Dust-proof



Allowable load	98N(10kgf)	Body (cover)	SPC
Weight	315g	Ball seat	SPC
Main ball	Nylon	Seal material	Nylon
Small ball	SUS304		

C-5L-5

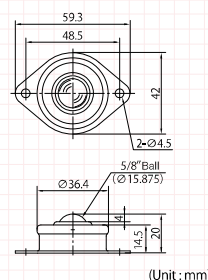
▲ Upward Steel



Allowable load	78.4N(8kgf)	Small ball	SWRM
Max. load	156.8N(16kgf)	Body (cover)	SPC
Weight	53g	Ball seat	SUS304
Main ball	SWRM	Cradle	SPC

S-5L-5

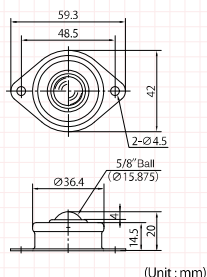
▲ Upward Stainless steel



Allowable load	78.4N(8kgf)	Small ball	SUS440C
Max. load	156.8N(16kgf)	Body (cover)	SUS304
Weight	55g	Ball seat	SUS304
Main ball	SUS440C	Cradle	SUS304

P-5L-5

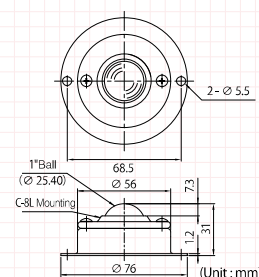
▲ Upward Resin



Allowable load	19.6N(2kgf)	Body (cover)	SPC
Weight	39g	Ball seat	SUS304
Main ball	Nylon	Cradle	SPC
Small ball	SUS304		

C-8L-5

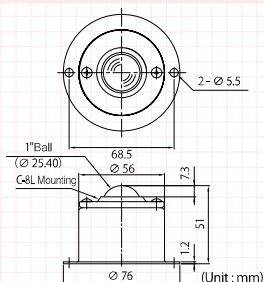
▲ Upward Steel



Allowable load	294N(30kgf)	Small ball	SWRM
Max. load	588N(60kgf)	Body (cover)	SPC
Weight	181g	Ball seat	SUS304
Main ball	SWRM	Cradle	SPC

C-8L-6

▲ Upward Steel



Allowable load	294N(30kgf)	Small ball	SWRM
Max. load	588N(60kgf)	Body (cover)	SPC
Weight	206g	Ball seat	SUS304
Main ball	SWRM	Cradle	SPC

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※The main ball of the stainless steel products contained herein is made of SUS440C. Please consult us for rust prevention purposes.

※The weight of single conveyance object shall not exceed 1,000 kg. It may change depending on conditions. Please consult us for details.

S-type

Press-molded products

RoHS

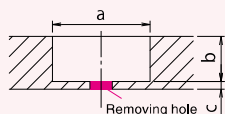


Built-in spring type press-molded products adopting our proprietary technology.

The load becomes uniform by means of the built-in spring, preventing uneven load caused by the shape of the conveyance object.

Mounting hole diagram

When using with the freebear unfixed (Embedding)



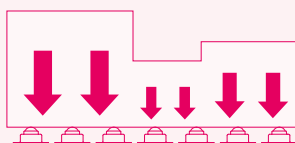
There may be foreign matter trapped in the gap between the freebear and the mounting hole, please cut a hole for removal.

Recommended mounting hole size

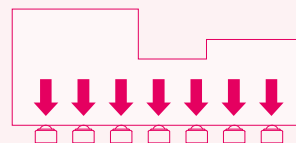
(Please adjust the hole depth according to the ball exit)

Model	a	b	c
□ -3S	∅ 20.5 $\begin{smallmatrix} +0.1 \\ 0 \end{smallmatrix}$	8.6 ~ 15.4	2 or above
□ -5S	∅ 26 $\begin{smallmatrix} +0.1 \\ 0 \end{smallmatrix}$	12 ~ 21.6	2 or above

The conveyance objects with special shapes as shown on the right may cause uneven load, which can be dispersed by using a product with built-in spring.



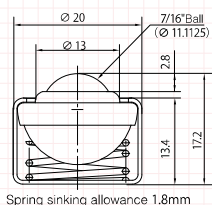
Normal freebear



Load dispersed by the built-in spring

C-3S

▲ Upward Steel



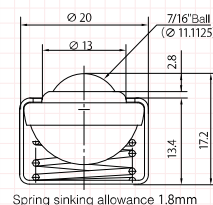
Spring sinking allowance 1.8mm

(Unit : mm)

Allowable load	49N(5kgf)	Main ball	SWRM	Spring	SWP
Mounting strength	49N(5kgf)	Small ball	SWRM	Outer cover	SPC
Max. strength	68N(7kgf)	Body (cover)	SPC		
Weight	18g	Ball seat	SPC		

S-3S

▲ Upward Stainless steel



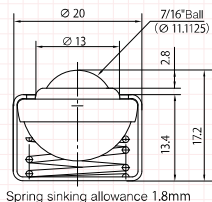
Spring sinking allowance 1.8mm

(Unit : mm)

Allowable load	49N(5kgf)	Main ball	SUS440C	Spring	SUS304
Mounting strength	49N(5kgf)	Small ball	SUS440C	Outer cover	SUS304
Max. strength	68N(7kgf)	Body (cover)	SUS304		
Weight	17g	Ball seat	SUS304		

P-3S

▲ Upward Resin



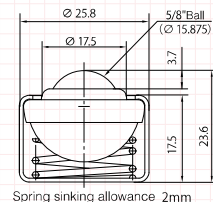
Spring sinking allowance 1.8mm

(Unit : mm)

Allowable load	9.8N(1kgf)	Main ball	Nylon	Spring	SWP
Mounting strength	9.8N(1kgf)	Small ball	SUS304	Outer cover	SPC
Max. strength	14.7N(1.5kgf)	Body (cover)	SPC		
Weight	12g	Ball seat	SPC		

C-5S

▲ Upward Steel



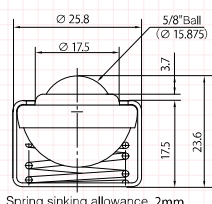
Spring sinking allowance 2mm

(Unit : mm)

Allowable load	78N(8kgf)	Main ball	SWRM	Spring	SWP
Mounting strength	78N(8kgf)	Small ball	SWRM	Outer cover	SPC
Max. strength	107N(11kgf)	Body (cover)	SPC		
Weight	37g	Ball seat	SUS304		

P-5S

▲ Upward Resin



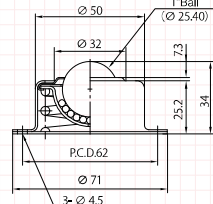
Spring sinking allowance 2mm

(Unit : mm)

Allowable load	19.6N(2kgf)	Main ball	Nylon	Spring	SWP
Mounting strength	19.6N(2kgf)	Small ball	SUS304	Outer cover	SPC
Max. strength	34.3N(3.5kgf)	Body (cover)	SPC		
Weight	21g	Ball seat	SUS304		

C-8S

▲ Upward Steel



Spring sinking allowance 2.5mm

(Unit : mm)

Allowable load	196N(20kgf)	Main ball	SWRM	Spring	SWP
Mounting strength	196N(20kgf)	Small ball	SWRM	Outer cover	SPC
Max. strength	294N(30kgf)	Body (cover)	SPC	Base plate	Steel plate
Weight	238g	Ball seat	SPC	Middle plate	Steel plate

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※The weight of single conveyance object shall not exceed 1,000 kg. It may change depending on conditions. Please consult us for details.

S-type

Press-molded products

RoHS

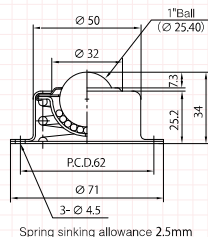
CAD

3D

P-8S

▲ Upward

Resin



Spring sinking allowance 2.5mm

(Unit : mm)

Allowable load	49N(5kgf)	Main ball	Nylon	Spring	SWP
Mounting strength	49N(5kgf)	Small ball	SUS304	Outer cover	SPC
Max. strength	58.8N(6kgf)	Body (cover)	SPC	Base plate	Steel plate
Weight	161g	Ball seat	SPC	Middle plate	Steel plate

K-type

Press-molded products

RoHS

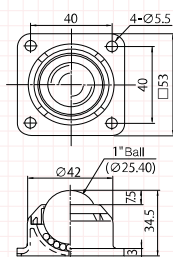
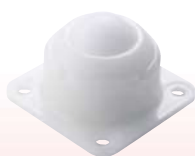
CAD

3D

J-8K

▲ Upward

Resin



(Unit : mm)

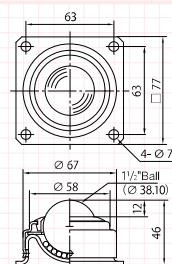
Allowable load	98N(10kgf)	Body (cover)	POM		
Weight	41g	Ball seat	POM		
Main ball	POM				
Small ball	SUS304				

C-12K (with nylon seal)

▲ Upward

Steel

Dust-proof



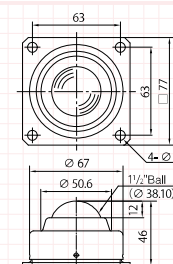
(Unit : mm)

Allowable load	588N(60kgf)	Small ball	SUJ2		
Max. load	1,176N(120kgf)	Body (cover)	SPC		
Weight	495g	Ball seat	SPC		
Main ball	SWRM	Seal material	Nylon		

S-12K

▲ Upward

Stainless steel



(Unit : mm)

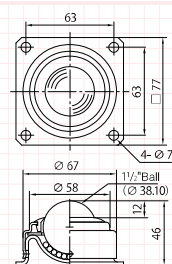
Allowable load	588N(60kgf)	Small ball	SUS440C		
Max. load	1,176N(120kgf)	Body (cover)	SUS304		
Weight	467g	Ball seat	SUS304		
Main ball	SUS440C				

P-12K (with nylon seal)

▲ Upward

Resin

Dust-proof



(Unit : mm)

Allowable load	98N(10kgf)	Body (cover)	SPC		
Weight	309g	Ball seat	SPC		
Main ball	Nylon	Seal material	Nylon		
Small ball	SUS304				

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R-type

Press-molded products

RoHS

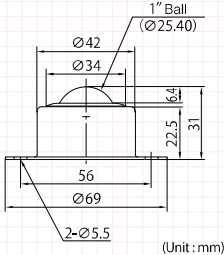
CAD

3D

Dust-proof type press-molded products adapting our proprietary technology.
The resin cover on those products can reduce the intrusion of scraps and dust.

C-8R (with nylon seal)

▲ Upward Steel Dust-proof

Allowable load	294N(30kgf)	Small ball	SWRM		
Max. load	588N(60kgf)	Body (cover)	SPC		
Weight	154g	Ball seat	SUS304		
Main ball	SWRM	Seal material	Nylon		

B-type

Press-molded products

RoHS

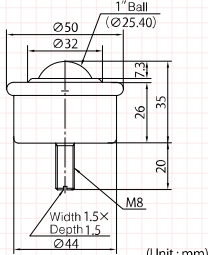
CAD

3D

Bolt type press-molded products adapting our proprietary technology.
The only bolt-mounting type among the press-molded products (refer to P1).

C-8B

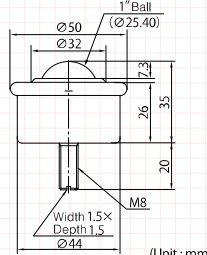
▲ Upward Steel

Allowable load	294N(30kgf)	Small ball	SWRM		
Max. load	588N(60kgf)	Body (cover)	SPC		
Weight	166g	Ball seat	SPC		
Main ball	SWRM	Outer cover	SPC		

P-8B

▲ Upward Resin

Allowable load	49N(5kgf)	Body (cover)	SPC		
Weight	108g	Ball seat	SPC		
Main ball	Nylon	Outer cover	SPC		
Small ball	SUS304				

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Roller bearing

Press-molded products

RoHS

CAD

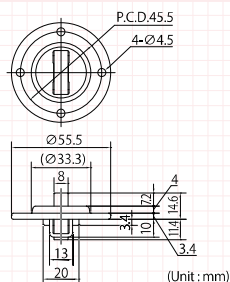
3D

Roller type with the same mounting dimensions and heights as C-8L and C-8L-5 is now available. Recommended when the degree of freedom needs to be restricted. In addition, the low body height also contributes to reduce the height of equipment and devices. It can also be used downward or sideways.

RC-30

▲ Upward

Steel



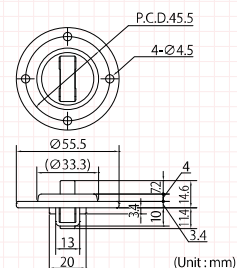
Allowable load 294N(30kgf)

Weight	73g
Roller	6000ZZ
Body	SPC

RP-30

▲ Upward

Resin



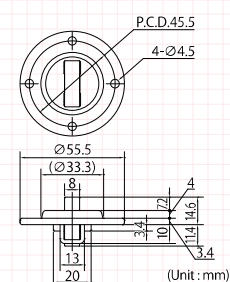
Allowable load 98N(10kgf)

Weight	59g
Roller	POM
Body	SPC

RS-30

▲ Upward

Stainless steel



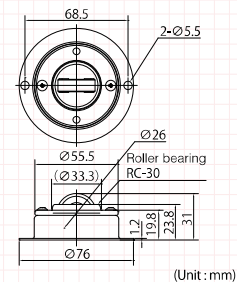
Allowable load 294N(30kgf)

Weight	73g
Roller	SB6000ZZ
Body	SUS304

RC-30-5

▲ Upward

Steel



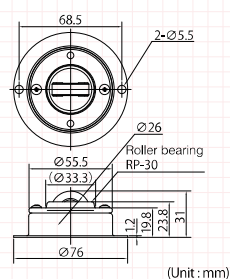
Allowable load 294N(30kgf)

Weight	125g
Roller	6000ZZ
Body	SPC

RP-30-5

▲ Upward

Resin



Allowable load 98N(10kgf)

Weight	111g
Roller	POM
Body	SPC

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H-type

Cutting-machined products

RoHS

CAD

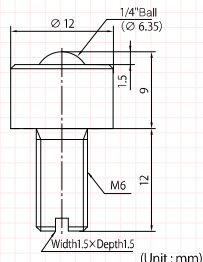
3D

Our products include taper type and dust-proof type (with rubber seal) and are suitable for various environments. They can be mounted in a narrow interval due to bolt mounting.

Single Freebear Product

C-2H

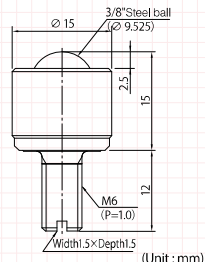
▲ Upward Steel



Allowable load	49N(5kgf)	Small ball	SUJ2
Max. load	98N(10kgf)	Body (cover)	SS400-equivalent
Weight	8g	Ball seat	SCM415
Main ball	SUJ2		

C-3H

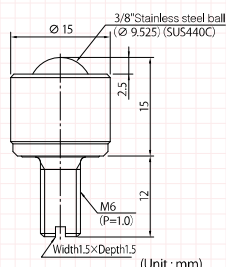
▲ Upward Steel



Allowable load	78.4N(8kgf)	Small ball	SUJ2
Max. load	156.8N(16kgf)	Body (cover)	SS400-equivalent
Weight	18g	Ball seat	SCM415
Main ball	SUJ2		

S-3H

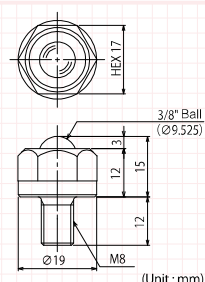
▲ Upward Stainless steel



Allowable load	78.4N(8kgf)	Small ball	SUS440C
Max. load	156.8N(16kgf)	Body (cover)	SUS303
Weight	18g	Ball seat	SUS440C
Main ball	SUS440C	Bolt	SUS303

C-3H-EX

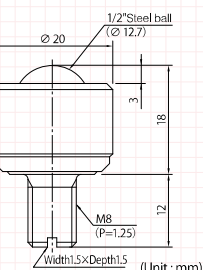
▲ Upward Steel



Allowable load	78.4N(8kgf)	Small ball	SUJ2
Max. load	156.8N(16kgf)	Body (cover)	SS400-equivalent
Weight	27g	Ball seat	SCM415
Main ball	SUJ2	Width across flats	17

C-4H

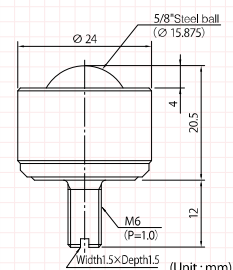
▲ Upward Steel



Allowable load	98N(10kgf)	Small ball	SUJ2
Max. load	196N(20kgf)	Body (cover)	SS400-equivalent
Weight	36g	Ball seat	SCM415
Main ball	SUJ2		

C-5H

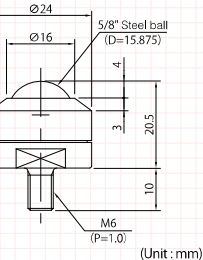
▲ Upward Steel



Allowable load	196N(20kgf)	Small ball	SUJ2
Max. load	392N(40kgf)	Body (cover)	SS400-equivalent
Weight	55g	Ball seat	SCM415
Main ball	SUJ2		

C-5HQ

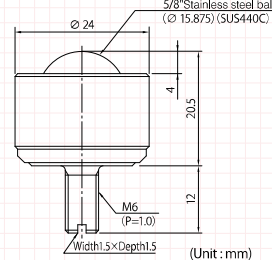
▲ Upward Steel



Allowable load	196N(20kgf)	Small ball	SUJ2
Max. load	392N(40kgf)	Body (cover)	SS400-equivalent
Weight	51g	Ball seat	SCM415
Main ball	SUJ2		

S-5H

▲ Upward Stainless steel



Allowable load	196N(20kgf)	Small ball	SUS440C
Max. load	392N(40kgf)	Body (cover)	SUS303
Weight	54g	Ball seat	SUS440C
Main ball	SUS440C	Bolt	SUS303

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 ※The main ball of the stainless steel products contained herein is made of SUS440C. Please consult us for rust prevention purposes.

H-type

Cutting-machined products

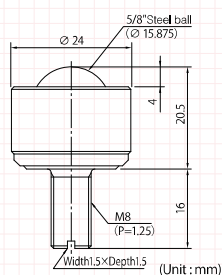
RoHS

CAD

3D

C-5H-M8x16

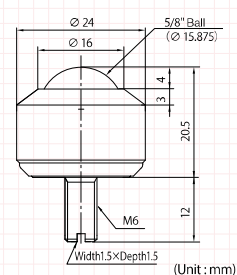
▲ Upward Steel



Allowable load	196N(20kgf)	Small ball	SUJ2
Max. load	392N(40kgf)	Body (cover)	SS400-equivalent
Weight	57g	Ball seat	SCM415
Main ball	SUJ2		

C-5HT

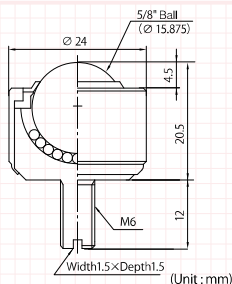
▲ Upward Steel



Allowable load	196N(20kgf)	Small ball	SUJ2
Max. load	392N(40kgf)	Body (cover)	SS400-equivalent
Weight	52g	Ball seat	SCM415
Main ball	SUJ2		

C-5HR (with rubber seal)

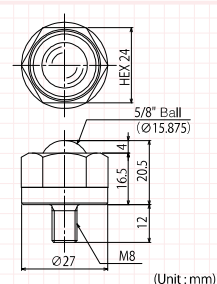
▲ Upward Steel Dust-proof



Allowable load	196N(20kgf)	Small ball	SUJ2
Max. load	392N(40kgf)	Body (cover)	SS400-equivalent
Weight	53g	Ball seat	SCM415
Main ball	SUJ2	Seal material	SUS304+NBR

C-5H-EX

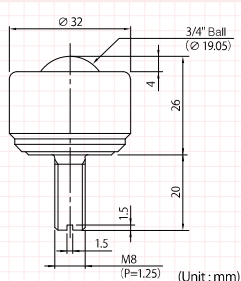
▲ Upward Steel



Allowable load	196N(20kgf)	Small ball	SUJ2
Max. load	392N(40kgf)	Body (cover)	SS400-equivalent
Weight	66g	Ball seat	SCM415
Main ball	SUJ2	Width across flats	24

C-6H

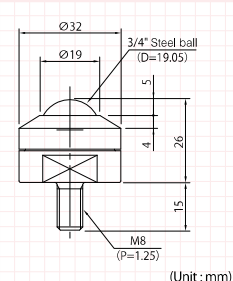
▲ Upward Steel



Allowable load	490N(50kgf)	Small ball	SUJ2
Max. load	980N(100kgf)	Body (cover)	SS400-equivalent
Weight	126g	Ball seat	SCM415
Main ball	SUJ2		

C-6HQ

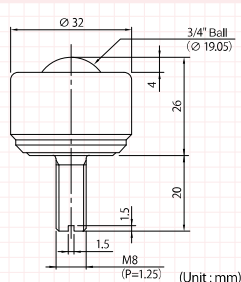
▲ Upward Steel



Allowable load	490N(50kgf)	Small ball	SUJ2
Max. load	980N(100kgf)	Body (cover)	SS400-equivalent
Weight	117g	Ball seat	SCM415
Main ball	SUJ2		

S-6H

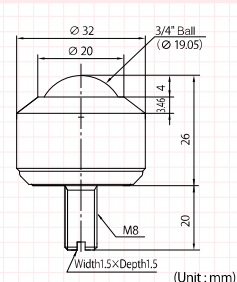
▲ Upward Stainless steel



Allowable load	490N(50kgf)	Small ball	SUS440C
Max. load	980N(100kgf)	Body (cover)	SUS303
Weight	124g	Ball seat	SUS440C
Main ball	SUS440C	Bolt	SUS303

C-6HT

▲ Upward Steel



Allowable load	490N(50kgf)	Small ball	SUJ2
Max. load	980N(100kgf)	Body (cover)	SS400-equivalent
Weight	121g	Ball seat	SCM415
Main ball	SUJ2		

※Product specifications are subject to change without prior notice. Please contact us for details. ※For materials not contained herein, please contact us.
 ※The main ball of the stainless steel products contained herein is made of SUS440C. Please consult us for rust prevention purposes.

H-type

Cutting-machined products

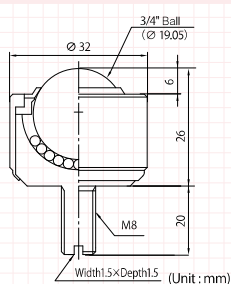
RoHS

CAD

3D

C-6HR (with rubber seal)

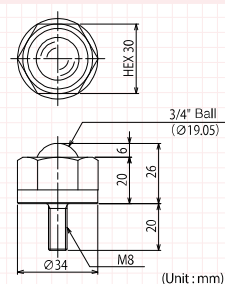
▲ Upward Steel Dust-proof



Allowable load	490N(50kgf)	Small ball	SUJ2
Max. load	980N(100kgf)	Body (cover)	SS400-equivalent
Weight	121g	Ball seat	SCM415
Main ball	SUJ2	Seal material	SS400-equivalent+NBR

C-6H-EX

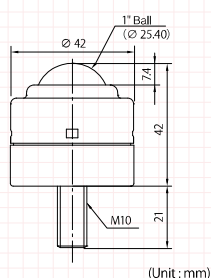
▲ Upward Steel



Allowable load	490N(50kgf)	Small ball	SUJ2
Max. load	980N(100kgf)	Body (cover)	SS400-equivalent
Weight	130g	Ball seat	SCM415
Main ball	SUJ2	Width across flats	30

C-8H

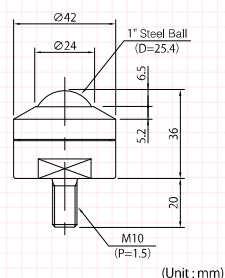
▲ Upward Steel



Allowable load	784N(80kgf)	Small ball	SUJ2
Max. load	1,568N(160kgf)	Body (cover)	SPC
Weight	337g	Ball seat	SCM415
Main ball	SUJ2	Bolt material	SCM435

C-8HQ

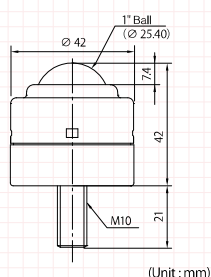
▲ Upward Steel



Allowable load	784N(80kgf)	Small ball	SUJ2
Max. load	1,568N(160kgf)	Body (cover)	SS400-equivalent
Weight	286g	Ball seat	SCM415
Main ball	SUJ2		

S-8H

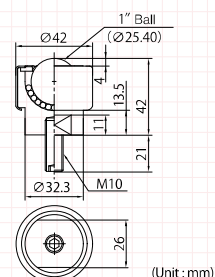
▲ Upward Stainless steel



Allowable load	784N(80kgf)	Small ball	SUS440C
Max. load	1,568N(160kgf)	Body (cover)	SUS304
Weight	330g	Ball seat	SUS440C
Main ball	SUS440C	Bolt material	SUS304-equivalent

C-8HB (with rubber seal)

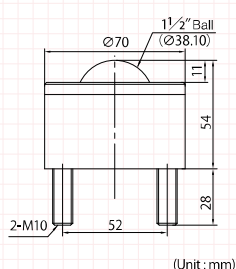
▲ Upward Steel Dust-proof



Allowable load	980N(100kgf)	Small ball	SUJ2	Bolt material	SCM435
Max. load	1,960N(200kgf)	Body (cover)	SPC		
Weight	311g	Ball seat	SCM415		
Main ball	SUJ2	Seal material	SUS304+NBR		

C-12HA

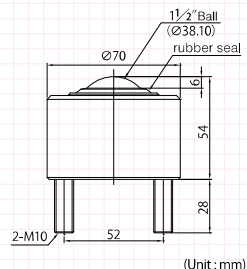
▲ Upward Steel



Allowable load	1,960N(200kgf)	Small ball	SUJ2
Max. load	3,920N(400kgf)	Body (cover)	SS400-equivalent
Weight	1,257g	Ball seat	SCM415
Main ball	SUJ2	Bolt material	SCM435

C-12HAR (with rubber seal)

▲ Upward Steel Dust-proof



Allowable load	1,960N(200kgf)	Small ball	SUJ2	Bolt material	SCM435
Max. load	3,920N(400kgf)	Body (cover)	SS400-equivalent		
Weight	1,242g	Ball seat	SCM415		
Main ball	SUJ2	Seal material	NBR		

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 ※The main ball of the stainless steel products contained herein is made of SUS440C. Please consult us for rust prevention purposes.

H-type

Cutting-machined products

RoHS

CAD

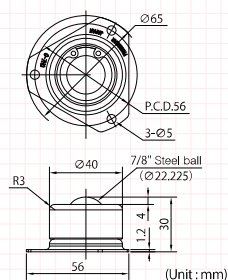
3D

The type with the heaviest load capacity among the freebear series.

Products with metal seal or rubber seal are also available to reduce the intrusion of scraps and dust.

C-7HC

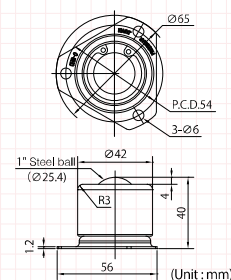
▲ Upward Steel



Allowable load	637N(65kgf)	Small ball	SUJ2	
Max. load	1,274N(130kgf)	Body (cover)	SS400-equivalent	
Weight	207g	Ball seat	SCM415	
Main ball	SUJ2	Flange	SUS304	

C-8HC

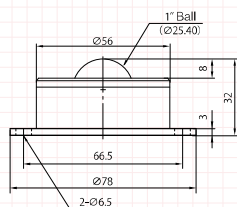
▲ Upward Steel



Allowable load	784N(80kgf)	Small ball	SUJ2	
Max. load	1,568N(160kgf)	Body (cover)	SPC	
Weight	328g	Ball seat	SCM415	
Main ball	SUJ2	Flange	SUS304	

C-8HA

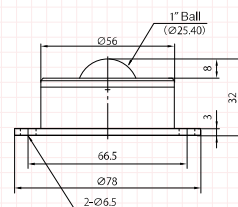
▲ Upward Steel



Allowable load	784N(80kgf)	Small ball	SUJ2	
Max. load	1,568N(160kgf)	Body (cover)	SS400-equivalent	
Weight	494g	Ball seat	SCM415	
Main ball	SUJ2	Flange	SS400-equivalent	

S-8HA

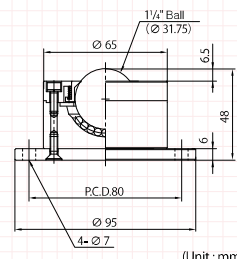
▲ Upward Stainless steel



Allowable load	784N(80kgf)	Small ball	SUS440C	
Max. load	1,568N(160kgf)	Body (cover)	SUS304	
Weight	498g	Ball seat	SUS440C	
Main ball	SUS440C	Ball seat case	SUS304	

C-10H (with metal seal)

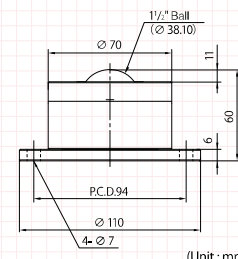
▲ Upward Steel Dust-proof



Allowable load	1,470N(150kgf)	Small ball	SUJ2	Flange	SS400-equivalent
Max. load	2,940N(300kgf)	Body (cover)	SS400-equivalent		
Weight	1,175g	Ball seat	SCM415		
Main ball	SUJ2	Seal material	SS400-equivalent		

C-12H

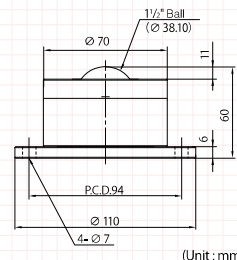
▲ Upward Steel



Allowable load	1,960N(200kgf)	Small ball	SUJ2	
Max. load	3,920N(400kgf)	Body (cover)	SS400-equivalent	
Weight	1,664g	Ball seat	SCM415	
Main ball	SUJ2	Flange	SS400-equivalent	

S-12H

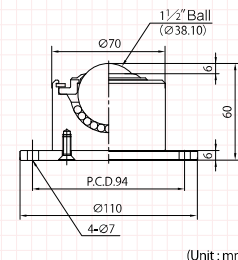
▲ Upward Stainless steel



Allowable load	1,960N(200kgf)	Small ball	SUS440C	Ball seat case	SUS303
Max. load	3,920N(400kgf)	Body (cover)	SUS303		
Weight	1,660g	Ball seat	SUS440C		
Main ball	SUS440C	Flange	SUS303		

C-12HR (with rubber seal)

▲ Upward Steel Dust-proof



Allowable load	1,960N(200kgf)	Small ball	SUJ2	Flange	SS400-equivalent
Max. load	3,920N(400kgf)	Body (cover)	SS400-equivalent		
Weight	1,648g	Ball seat	SCM415		
Main ball	SUJ2	Seal material	SS400-equivalent+NBR		

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※The main ball of the stainless steel products contained herein is made of SUS440C. Please consult us for rust prevention purposes.

H-type

Cutting-machined products

RoHS

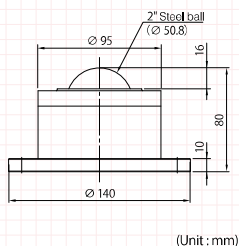
CAD

3D

C-16H

▲ Upward

Steel

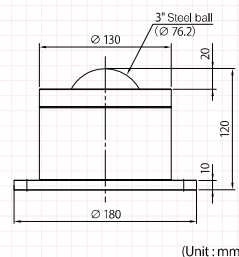


Allowable load	2,940N(300kgf)	Small ball	SUJ2		
Max. load	5,880N(600kgf)	Body (cover)	SS400-equivalent		
Weight	3,996g	Ball seat	SCM415		
Main ball	SUJ2	Flange	SS400-equivalent		

C-24H

▲ Upward

Steel

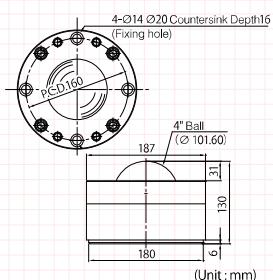


Allowable load	4,900N(500kgf)	Small ball	SUJ2	Flange	SS400-equivalent
Max. load	9,800N(1,000kgf)	Body (cover)	SS400-equivalent		
Weight	10,810g	Ball seat	SCM415		
Main ball	SUJ2	Seal material	Felt		

C-32H

▲ Upward

Steel

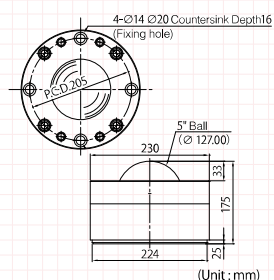


Allowable load	9,800N(1,000kgf)	Small ball	SUJ2		
Max. load	19,600N(2,000kgf)	Body (cover)	SS400-equivalent		
Weight	20,000g	Ball seat	SCM415		
Main ball	SUJ2				

C-40H

▲ Upward

Steel

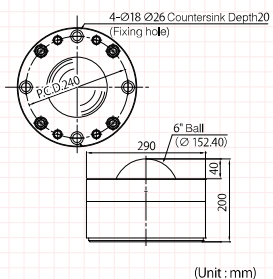


Allowable load	11,760N(1,200kgf)	Small ball	SUJ2		
Max. load	23,520N(2,400kgf)	Body (cover)	SS400-equivalent		
Weight	40,000g	Ball seat	SCM415		
Main ball	SUJ2				

C-48H

▲ Upward

Steel



Allowable load	19,600N(2,000kgf)	Small ball	SUJ2		
Max. load	39,200N(4,000kgf)	Body (cover)	SS400-equivalent		
Weight	80,000g	Ball seat	SCM415		
Main ball	SUJ2				

HJ-type

Cutting-machined products

RoHS

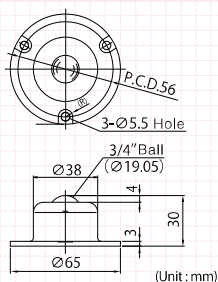
CAD

3D

Compared with cutting-machined products (with identical main ball size), the load capacity is unchanged, but the weight is smaller. They can be used in clean room and may suction dust (J-6HJ only) through the vacuum hole.

C-6HAL-W

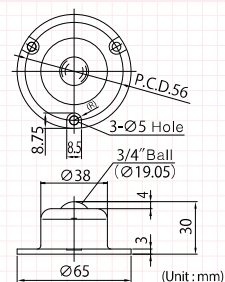
▲ Upward Steel



Allowable load	490N(50kgf)	Small ball	SUJ2
Max. load	980N(100kgf)	Body (cover)	A5056
Weight	212g	Ball seat	SUS440C
Main ball	SUJ2		

C-6HJ

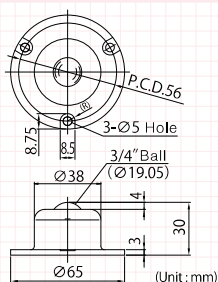
▲ Upward Steel



Allowable load	490N(50kgf)	Small ball	SUJ2
Max. load	980N(100kgf)	Body (cover)	POM
Weight	138g	Ball seat	SCM415
Main ball	SUJ2		

S-6HJ

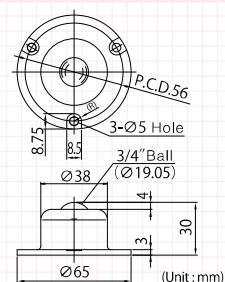
▲ Upward Stainless steel



Allowable load	490N(50kgf)	Small ball	SUS440C
Max. load	980N(100kgf)	Body (cover)	POM
Weight	134g	Ball seat	SUS440C
Main ball	SUS440C		

J-6HJ

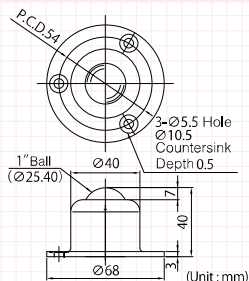
▲ Upward Resin



Allowable load	49N(5kgf)	Body (cover)	POM
Weight	49g	Ball seat	POM
Main ball	POM		
Small ball	SUS304		

C-8HJ

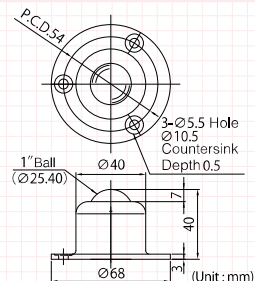
▲ Upward Steel



Allowable load	784N(80kgf)	Small ball	SUJ2
Max. load	1,568N(160kgf)	Body (cover)	POM
Weight	230g	Ball seat	SUJ2
Main ball	SUJ2		

S-8HJ

▲ Upward Stainless steel



Allowable load	784N(80kgf)	Small ball	SUS440C
Max. load	1,568N(160kgf)	Body (cover)	POM
Weight	230g	Ball seat	SUS440C
Main ball	SUS440C		

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 ※The main ball of the stainless steel products contained herein is made of SUS440C. Please consult us for rust prevention purposes.

D-type

Cutting-machined products

RoHS

CAD

3D

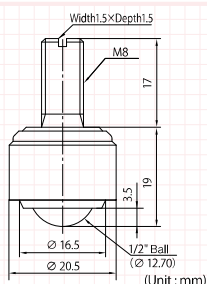
Tray structure specialized for downward type is used. They can be used for positioning or replace casters.

Single Freebear Product

C-4D

▼ downward

Steel

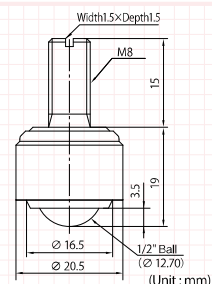


Allowable load	98N(10kgf)	Small ball	SUJ2	
Max. load	196N(20kgf)	Body (cover)	SS400-equivalent	
Weight	38g	Ball seat	SCM415	
Main ball	SUJ2	Middle ring	SS400-equivalent	

S-4D

▼ downward

Stainless steel

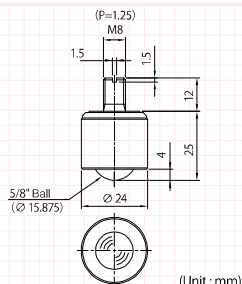


Allowable load	98N(10kgf)	Small ball	SUS440C	
Max. load	196N(20kgf)	Body (cover)	SUS303	
Weight	36g	Ball seat	SUS440C	
Main ball	SUS440C	Middle ring	SUS440C	

C-5D

▼ downward

Steel

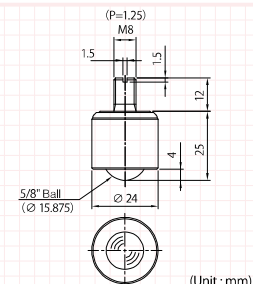


Allowable load	196N(20kgf)	Small ball	SUJ2	
Max. load	392N(40kgf)	Body (cover)	SS400-equivalent	
Weight	69g	Ball seat	SCM415	
Main ball	SUJ2	Middle ring	SS400-equivalent	

S-5D

▼ downward

Stainless steel



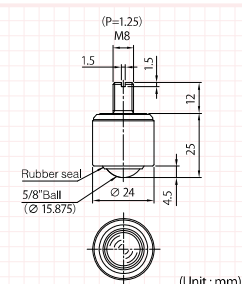
Allowable load	196N(20kgf)	Small ball	SUS440C	
Max. load	392N(40kgf)	Body (cover)	SUS303	
Weight	69g	Ball seat	SUS440C	
Main ball	SUS440C	Middle ring	SUS303	

C-5DR (with rubber seal)

▼ downward

Steel

Dust-proof

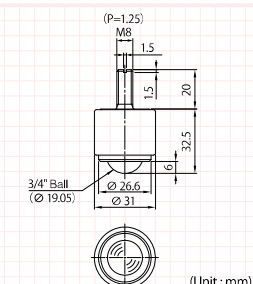


Allowable load	196N(20kgf)	Small ball	SUJ2	Middle ring	SS400-equivalent
Max. load	392N(40kgf)	Body (cover)	SS400-equivalent		
Weight	67g	Ball seat	SCM415		
Main ball	SUJ2	Seal material	SUS304+NBR		

C-6D

▼ downward

Steel



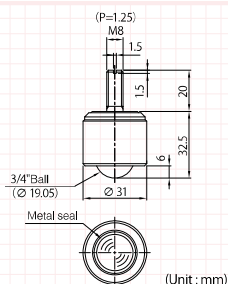
Allowable load	490N(50kgf)	Small ball	SUJ2	Ball seat case	S45C
Max. load	980N(100kgf)	Body (cover)	SPC	Ball holder	SS400-equivalent
Weight	144g	Ball seat	SCM415		
Main ball	SUJ2	Middle ring	SS400-equivalent		

S-6D (with metal seal)

▼ downward

Stainless steel

Dust-proof



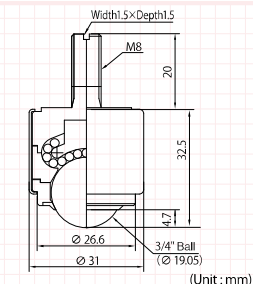
Allowable load	490N(50kgf)	Small ball	SUS440C	Middle ring	SUS303
Max. load	980N(100kgf)	Body (cover)	SUS303	Ball seat case	SUS303
Weight	144g	Ball seat	SUS440C		
Main ball	SUS440C	Seal material	SUS303		

C-6DR (with rubber seal)

▼ downward

Steel

Dust-proof



Allowable load	490N(50kgf)	Small ball	SUJ2	Middle ring	SS400-equivalent
Max. load	980N(100kgf)	Body (cover)	SPC	Ball seat case	S45C
Weight	142g	Ball seat	SCM415		
Main ball	SUJ2	Seal material	SS400-equivalent+NBR		

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 ※The main ball of the stainless steel products contained herein is made of SUS440C. Please consult us for rust prevention purposes.

D-type

Cutting-machined products

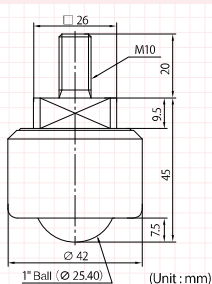
RoHS

CAD

3D

C-8D

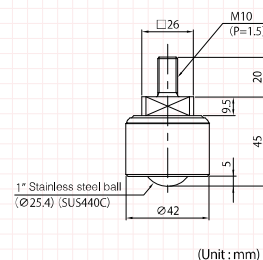
▼ downward Steel



Allowable load	784N(80kgf)	Small ball	SUJ2	Middle ring	SS400-equivalent
Max. load	1,568N(160kgf)	Body (cover)	SS400-equivalent		
Weight	332g	Ball seat	SCM415		
Main ball	SUJ2	Ball seat case	S45C		

S-8D (with metal seal)

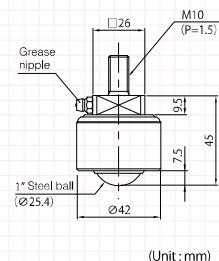
▼ downward Stainless steel Dust-proof



Allowable load	784N(80kgf)	Small ball	SUS440C	Ball seat case	SUS303
Max. load	1,568N(160kgf)	Body (cover)	SUS303	Middle ring	SUS303
Weight	327g	Ball seat	SUS440C		
Main ball	SUS440C	Seal material	SUS303		

C-8DA (with rubber seal/grease nipple)

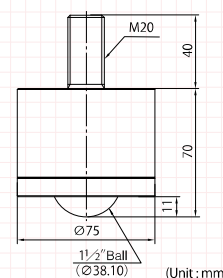
▼ downward Steel Dust-proof



Allowable load	784N(80kgf)	Small ball	SUJ2	Ball seat case	S45C
Max. load	1,568N(160kgf)	Body (cover)	SS400-equivalent	Middle ring	SS400-equivalent
Weight	309g	Ball seat	SCM415		
Main ball	SUJ2	Seal material	SS400-equivalent+NBR		

C-12HD

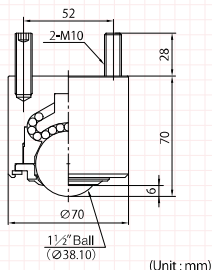
▼ downward Steel



Allowable load	1,960N(200kgf)	Small ball	SUJ2	Ball seat case	SS400-equivalent
Max. load	3,920N(400kgf)	Body (cover)	SS400-equivalent	Middle ring	SS400-equivalent
Weight	2,000g	Ball seat	SCM415		
Main ball	SUJ2	Seal material	Felt		

C-12HDR (with rubber seal)

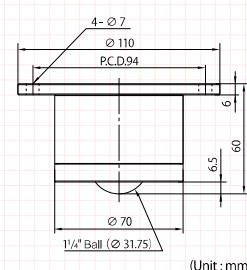
▼ downward Steel Dust-proof



Allowable load	1,960N(200kgf)	Small ball	SUJ2	Middle ring	SS400-equivalent
Max. load	3,920N(400kgf)	Ball seat	SCM415		
Weight	1,684g	Seal material	SS400-equivalent+NBR		
Main ball	SUJ2	Ball seat case	SS400-equivalent		

C-10D (with metal seal)

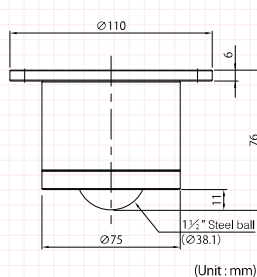
▼ downward Steel Dust-proof



Allowable load	1,470N(150kgf)	Small ball	SUJ2	Ball seat case	SS400-equivalent
Max. load	2,940N(300kgf)	Body (cover)	SS400-equivalent	Middle ring	SS400-equivalent
Weight	1,733g	Ball seat	SCM415	Flange	SS400-equivalent
Main ball	SUJ2	Seal material	SS400-equivalent		

C-12D

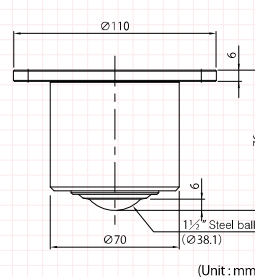
▼ downward Steel



Allowable load	1,960N(200kgf)	Small ball	SUJ2	Ball seat case	SS400-equivalent
Max. load	3,920N(400kgf)	Body (cover)	SS400-equivalent	Middle ring	SS400-equivalent
Weight	2,342g	Ball seat	SCM415	Flange	SS400-equivalent
Main ball	SUJ2	Seal material	Felt		

C-12DR (with rubber seal)

▼ downward Steel Dust-proof



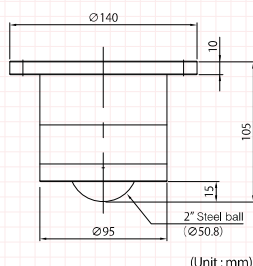
Allowable load	1,960N(200kgf)	Small ball	SUJ2	Middle ring	SS400-equivalent
Max. load	3,920N(400kgf)	Ball seat	SCM415	Flange	SS400-equivalent
Weight	2,080g	Seal material	SS400-equivalent+NBR		
Main ball	SUJ2	Ball seat case	SS400-equivalent		

※Product specifications are subject to change without prior notice. Please contact us for details. ※For materials not contained herein, please contact us.
 ※The main ball of the stainless steel products contained herein is made of SUS440C. Please consult us for rust prevention purposes.

C-16D

▼downward

Steel

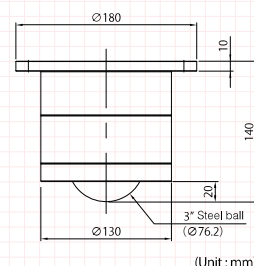


Allowable load	2,940N(300kgf)	Small ball	SUJ2	Ball seat case	SS400-equivalent
Max. load	5,880N(600kgf)	Body (cover)	SS400-equivalent	Middle ring	SCM415
Weight	5,351g	Ball seat	SCM415	Flange	SS400-equivalent
Main ball	SUJ2	Seal material	Felt		

C-24D

▼downward

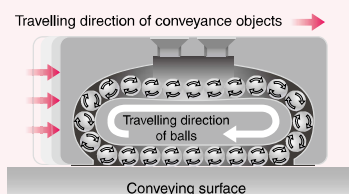
Steel



Allowable load	4,900N(500kgf)	Small ball	SUJ2	Ball seat case	SS400-equivalent
Max. load	9,800N(1,000kgf)	Body (cover)	SS400-equivalent	Middle ring	SCM415
Weight	12,500g	Ball seat	SCM415	Flange	SS400-equivalent
Main ball	SUJ2	Seal material	Felt		

Mechanism of mega-slider movement

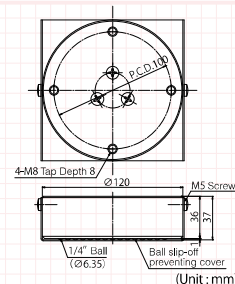
By supporting the conveying surface with multiple balls, it can carry a larger load in a small space.
It can rotate conveyance objects immediately and move them in all directions, such as back and forth, left and right, and obliquely. So, it is used for a variety of applications.



The conveying surface must be as flat and hard as possible.
(Recommended Surface roughness▽▽▽ / Quenching hardness HRC55 or above)

AWS-5

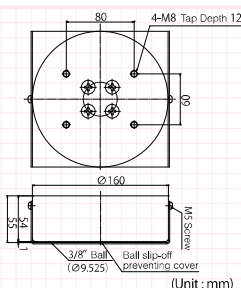
Steel



Allowable load	49,000N(5,000kgf)	Ball seat	SUJ2		
Weight	3,000g				
Ball	SUJ2				
Body (case)	SS400-equivalent				

AWS-8

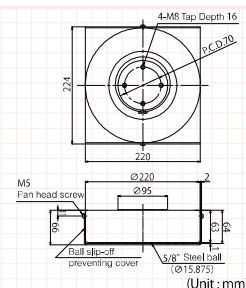
Steel



Allowable load	78,400N(8,000kgf)	Ball seat	SKS93		
Weight	7,000g				
Ball	SUJ2				
Body (case)	SS400-equivalent				

AWS-16

Steel

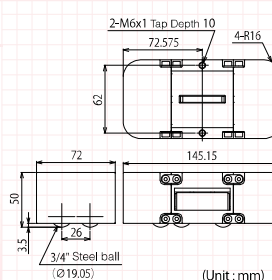


Allowable load	156,800N(16,000kgf)	Ball seat	S55C		
Weight	15,500g				
Ball	SUJ2				
Body (case)	SS400-equivalent				

FBS-1 Steel

▲Upward ▼downward

Steel

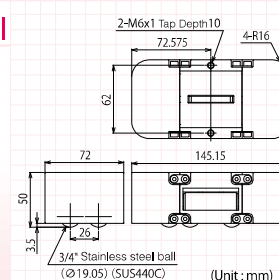


Allowable load	9,800N(1,000kgf)	Frame	SCS13		
Weight	3,000g	Cover	SUS304		
Ball	SUJ2				
End block	SCS13				

FBS-1 Stainless steel

▲Upward ▼downward

Stainless steel



Allowable load	9,800N(1,000kgf)	Frame	SCS13		
Weight	3,000g	Cover	SUS304		
Ball	SUS440C				
End block	SCS13				

Z-type

Cutting-machined products

RoHS

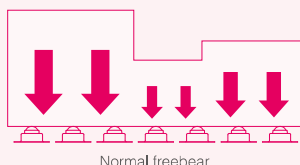
CAD

3D

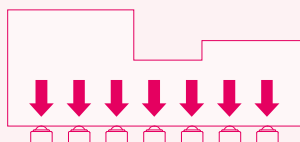
Spring type cutting-machined products.

The load becomes uniform by means of the spring, preventing uneven load caused by the shape of the load.

The conveyance objects with special shapes as shown on the below may cause uneven load, which can be dispersed by using a product with built-in spring.



Normal freebear



Load dispersed by the built-in spring

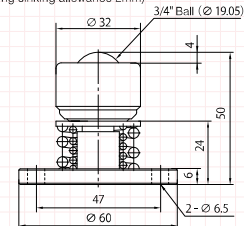
C-6Z

▲ Upward

Steel



(Spring sinking allowance 2mm)



(Unit : mm)

Allowable load	50kg	Main ball	SUJ2	Spring	SWP
Mounting strength	490N(50kgf)	Small ball	SUJ2	Flange	SS400-equivalent
Max. strength	686N(70kgf)	Body (cover)	SS400-equivalent		
Weight	303g	Ball seat	SCM415		

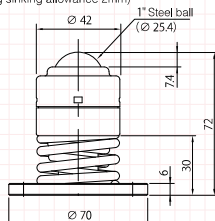
C-8Z

▲ Upward

Steel



(Spring sinking allowance 2mm)



(Unit : mm)

Allowable load	80kg	Main ball	SUJ2	Spring	SWP
Mounting strength	784N(80kgf)	Small ball	SUJ2	Flange	SS400-equivalent
Max. strength	1,029N(105kgf)	Body (cover)	SPC		
Weight	646g	Ball seat	SCM415		

C-8ZB

(with rubber seal)

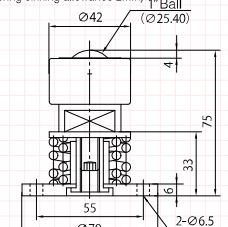
▲ Upward

Steel

Dust-proof



(Spring sinking allowance 2mm)



(Unit : mm)

Allowable load	100kg	Main ball	SUJ2	Spring	SWP
Mounting strength	980N(100kgf)	Small ball	SUJ2	Seal material	SUS304+NBR
Max. strength	1,274N(130kgf)	Body (cover)	SPC	Flange	SS400-equivalent
Weight	659g	Ball seat	SCM415		

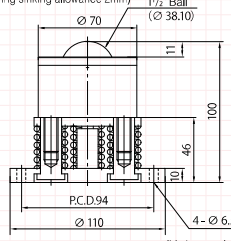
C-12Z

▲ Upward

Steel



(Spring sinking allowance 2mm)



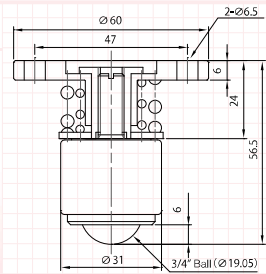
(Unit : mm)

Allowable load	200kg	Main ball	SUJ2	Spring	SWP
Mounting strength	1,961N(200kgf)	Small ball	SUJ2	Flange	SS400-equivalent
Max. strength	2,548N(260kgf)	Body (cover)	SS400-equivalent		
Weight	2,434g	Ball seat	SCM415		

C-6DZ

▼ downward

Steel



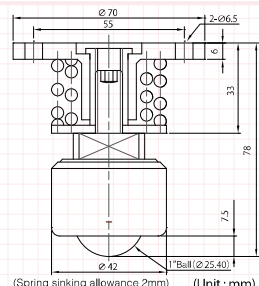
(Spring sinking allowance 2mm) (Unit : mm)

Allowable load	50kg	Main ball	SUJ2	Spring	SWP
Mounting strength	490N(50kgf)	Small ball	SUJ2	Flange	SS400-equivalent
Max. strength	686N(70kgf)	Body (cover)	SPC		
Weight	322g	Ball seat	SCM415		

C-8DZ

▼ downward

Steel



(Spring sinking allowance 2mm) (Unit : mm)

Allowable load	80kg	Main ball	SUJ2	Spring	SWP
Mounting strength	784N(80kgf)	Small ball	SUJ2	Flange	SS400-equivalent
Max. strength	1,029N(105kgf)	Body (cover)	SS400-equivalent	Ball seat case	S45C
Weight	672g	Ball seat	SCM415		

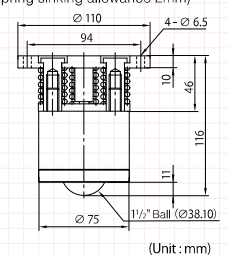
C-12DZ

▼ downward

Steel



(Spring sinking allowance 2mm)



(Unit : mm)

Allowable load	200kg	Main ball	SUJ2	Spring	SWP
Mounting strength	1,961N(200kgf)	Small ball	SUJ2	Seal material	Felt
Max. strength	2,548N(260kgf)	Body (cover)	SS400-equivalent	Flange	SS400-equivalent
Weight	3,130g	Ball seat	SCM415	Ball seat case	SS400-equivalent

※Product specifications are subject to change without prior notice. Please contact us for details. ※For materials not contained herein, please contact us.

※The main ball of the stainless steel products contained herein is made of SUS440C. Please consult us for rust prevention purposes.

HS/DS-type

Cutting-machined products

RoHS

CAD

3D

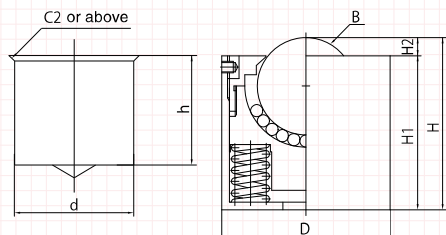
These products can be buried in existing cushion pin holes of the press or holes drilled in the machine bed.

After the workpiece is conveyed and positioned, it can be clamped and fixed by sinking main balls. ※Heat-resistant type is also available.

▲ Upward Steel



C-5HS C-6HS C-8HS C-8HS-200



(Unit: mm)

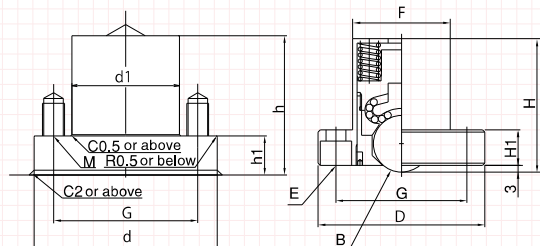
The mold weights 1 ton, and ten pieces of C-8HS are used. When putting them at the mold bottom, the clamping force is
[force making C-8HS sink 2mm : 180kgf] × 10 = [Mold weight 1 ton]=800kgf

Model	Mounting hole size (mm)		Body size (mm)					Weight (g)	Load test data (average) kN (kgf)			
	d	h	H	H1	H2	D	B		Sinking amount			
									0.5mm	1.0mm	1.5mm	2.0mm
C-5HS	Ø 30 ^{+1.0} / _{+0.5}	29	31	28	3	Ø 30	5/8" Ball (Ø 15.875)	115	0.23 (24)	0.25 (26)	0.27 (28)	0.29 (30)
C-6HS	Ø 38 ^{+1.0} / _{+0.5}	36	38	35		Ø 38	3/4" Ball (Ø 19.05)	230	0.58 (60)	0.63 (65)	0.68 (70)	0.73 (75)
C-8HS	Ø 44 ^{+1.0} / _{+0.5}	43	45	40.3	4.7	Ø 44	1" Ball (Ø 25.4)	345	1.17 (120)	1.37 (140)	1.56 (160)	1.76 (180)
C-8HS-200	Ø 60 ^{+1.0} / _{+0.5}	58	60	55	5	Ø 60		800	2.35 (240)	2.54 (260)	2.74 (280)	2.94 (300)

▼ downward Steel



C-6DS C-8DS



(Unit: mm)

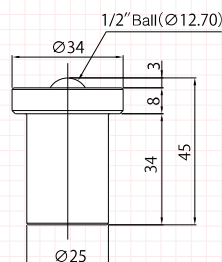
Model	Mounting hole size (mm)					Body size (mm)								Weight (g)	Load test data (average) kN (kgf)				
	d	d1	h	h1	M	G	H	H1	D	F	E (Mounting bolt hole)	B	Sinking amount						
													0.5mm		1.0mm	1.5mm	2.0mm		
C-6DS	Ø 61	+1.0 +0.5	Ø 38	+1.0 +0.5	46	14 ± 0.1	M6	48	47.5	13	Ø 60	Ø 38	2- Ø 6.5 Ø 11 Countersink Depth 8	3/4" Ball (Ø 19.05)	470	0.58 (60)	0.63 (65)	0.68 (70)	0.73 (75)
C-8DS	Ø 76	+1.0 +0.5	Ø 44	+1.0 +0.5	58.5	17 ± 0.1	M8	59	60	16	Ø 75	Ø 44	2- Ø 9 Ø 14 Countersink Depth 11	1" Ball (Ø 25.4)	825	1.17 (120)	1.37 (140)	1.56 (160)	1.76 (180)

▲ Upward Steel

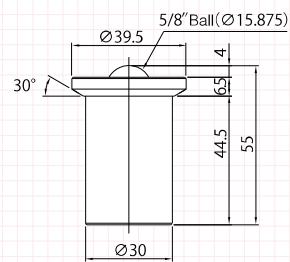


C-4HS-20 C-5HS-50

C-4HS-20



C-5HS-50



(Unit: mm)

Model	Weight (g)	Load test data (average) kN (kgf)			
		Sinking amount			
		0.5mm	1.0mm	1.5mm	2.0mm
C-4HS-20	130	0.23 (24)	0.25 (26)	0.27 (28)	0.29 (30)
C-5HS-50	220	1.0mm	2.0mm	3.0mm	4.0mm
		0.56 (57)	0.62 (63)	0.68 (69)	0.74 (75)

※Product specifications are subject to change without prior notice. Please contact us for details. ※For materials not contained herein, please contact us.

※The main ball of the stainless steel products contained herein is made of SUS440C. Please consult us for rust prevention purposes.

We have a full range of products to suit your needs.

We offer a full range of products, please select according to your purpose, intended use, environment and conditions.

They can not only be used individually, but also used in combination.

J-series

RoHS

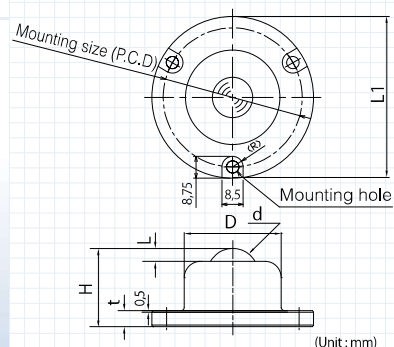
CAD

3D

▲ Upward

Resin

J-6HJ-CR



Model	Recommended load	Body, Main ball	Small ball	H	t	L	L1	Mounting size	Mounting hole	D	d
J-6HJ-CR	3kg	POM	SUS304	30	3	4	65	Ø 56	Ø 5	Ø 38	3/4" Ball (Ø 19.05)

J-series

RoHS

CAD

3D

▲ Upward

Resin

Example of product name

J-5Y-[Main ball material]-CR

J-8Y-CR

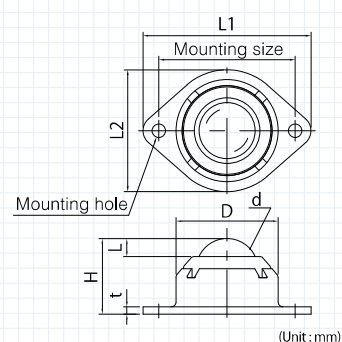
J-5Y-CR



POM / UPE / PEEK



POM / UPE / PEEK



Model	Recommended load	Body	Main ball	Small ball	H	t	L	L1	L2	Mounting size	Mounting hole	D	d
J-5Y-CR	2kg	POM	POM / UPE / PTFE / PEEK	SUS304	20	5	4	50	33	41	Ø 4.5	Ø 30	5/8" Ball (Ø 15.875)
J-8Y-CR	5kg	POM	POM / UPE / PTFE / PEEK	SUS304	31	3	7.5	69	50	56	Ø 5.5	Ø 42	1" Ball (Ø 25.40)

S-series

RoHS

CAD

3D

▲ Upward

Resin

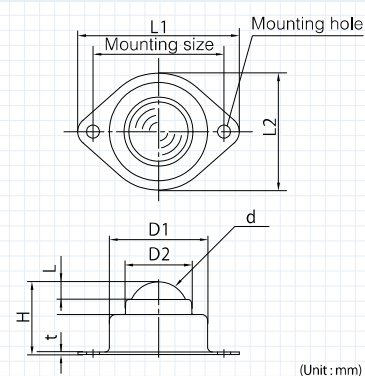
Example of product name

S-8Y-[Main ball material]-CR

S-8Y-CR



POM / UPE / PEEK



Model	Recommended load	Body, Small ball	Main ball	H	t	L	L1	L2	Mounting size	Mounting hole	D1	D2	d
S-8Y-CR	5kg	SUS304	POM / UPE / PTFE / PEEK	31	1	7.5	69	50	56	Ø 5.5	Ø 42	Ø 29.5	1" Ball (Ø 25.40)

※For materials not contained herein, please contact us. ※Product specifications are subject to change without prior notice. Please contact us for details.
 ※"CR" in model means clean packaging. ※The clean type freebearings adopt the precision washing and clean packaging as standard.

Select the material

Example: **J-3H-** Body material **-** Main ball material **-CR**

Please order by selecting the contents inside of in each Example of product name from the following tables.

※Some may not be used in combination depending on their contents. Please contact us for details.

J series

RoHS

CAD

3D

▲Upward Resin Example of product name J-3H-Body material-Main ball material-CR

J-3H-CR

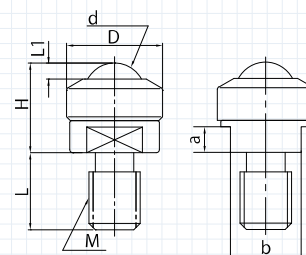


UPE / POM / PEEK / UPE static conductive

J-5H-CR



UPE / POM / PEEK / UPE static conductive



(Unit: mm)

Model	Recommended load	Body, Main ball	Small ball	H	L	L1	D	M	a	b	d
J-3H-CR	1kg	POM / UPE / PTFE / PEEK UPE static conductive / PEEK static conductive	SUS304	14	12	2.5	∅ 15	M8	4	11	3/8" Ball (∅ 9.525)
J-5H-CR	2kg			20.5	15	4	∅ 24	M8	5	21	5/8" Ball (∅ 15.875)

SJ series

RoHS

CAD

3D

▲Upward Resin Example of product name SJ-3H-Cover material-Main ball material-CR

SJ-3H-CR

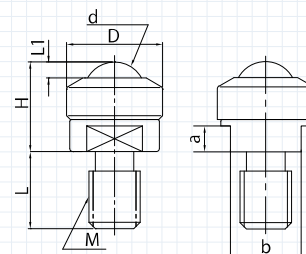


UPE / POM / PEEK / UPE static conductive

SJ-5H-CR



UPE / POM / PEEK / UPE static conductive



(Unit: mm)

Model	Recommended load	Body, Small ball	Main ball, Cover	H	L	L1	D	M	a	b	d
SJ-3H-CR	1kg	SUS304	POM / UPE / PTFE / PEEK UPE static conductive / PEEK static conductive	14	12	2.5	∅ 15	M8	4	11	3/8" Ball (∅ 9.525)
SJ-5H-CR	2kg			20.5	15	4	∅ 24	M8	5	21	5/8" Ball (∅ 15.875)

HK series

RoHS

CAD

3D

▲Upward Resin Example of product name S-3HK-Main ball material-CR

S-3HK-CR

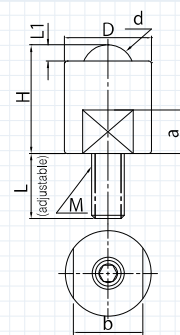


UPE / POM / PEEK / UPE static conductive

S-5HK-CR



UPE / POM / PEEK / UPE static conductive



(Unit: mm)

Model	Recommended load	Body, Small ball	Main ball	H	L	L1	D	M	a	b	d
S-3HK-CR	1kg	SUS304	POM / UPE / PTFE / PEEK / ARAMID UPE static conductive / PEEK static conductive	20	12	3	∅ 16	M6	8	13	3/8" Ball (∅ 9.525)
S-5HK-CR	2kg			28	13	5	∅ 24	M6	9	19	5/8" Ball (∅ 15.875)

※For materials not contained herein, please contact us. ※Product specifications are subject to change without prior notice. Please contact us for details.

※"CR" in model means clean packaging. ※The clean type freebears adopt the precision washing and clean packaging as standard.

Heavy load type For clean room

RoHS

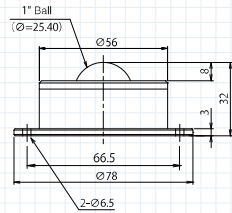
CAD

3D

※If you wish to use other materials, please note in the inquiry sheet of P28.

S-8HA-CR

▲ Upward Stainless steel

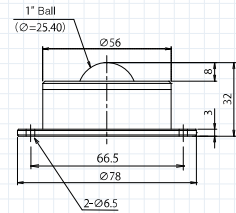


(Unit : mm)

Allowable load	784N(80kgf)	Small ball	SUS440C	
Max. load	1,568N(160kgf)	Body (cover)	SUS304	
Weight	498g	Ball seat	SUS440C	
Main ball	SUS440C	Ball seat case	SUS304	

S-12H-CR

▲ Upward Stainless steel

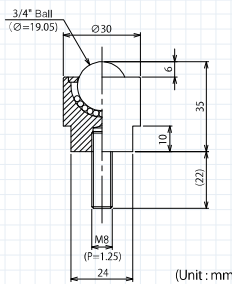


(Unit : mm)

Allowable load	1,960N(200kgf)	Small ball	SUS440C	Ball seat case	SUS303
Max. load	3,920N(400kgf)	Body (cover)	SUS303		
Weight	1,660g	Ball seat	SUS440C		
Main ball	SUS440C	Flange	SUS303		

S-6HK-CR

▲ Upward Stainless steel

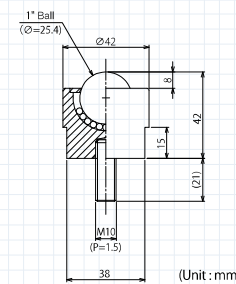


(Unit : mm)

Allowable load	490N(50kgf)	Small ball	SUS440C	
Max. load	980N(100kgf)	Body (cover)	SUS304-equivalent	
Weight	160g	Ball seat	SUS440C	
Main ball	SUS440C	Bolt material	SUS304-equivalent	

S-8HK-CR

▲ Upward Stainless steel

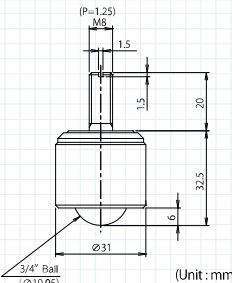


(Unit : mm)

Allowable load	784N(80kgf)	Small ball	SUS440C	
Max. load	1,568N(160kgf)	Body (cover)	SUS303	
Weight	356g	Ball seat	SUS440C	
Main ball	SUS440C	Bolt material	SUS304-equivalent	

S-6D-CR

▼ downward Stainless steel

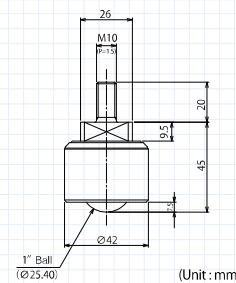


(Unit : mm)

Allowable load	490N(50kgf)	Small ball	SUS440C	Middle ring	SUS303
Max. load	980N(100kgf)	Body (cover)	SUS303		
Weight	144g	Ball seat	SUS440C		
Main ball	SUS440C	Ball seat case	SUS303		

S-8D-CR

▼ downward Stainless steel

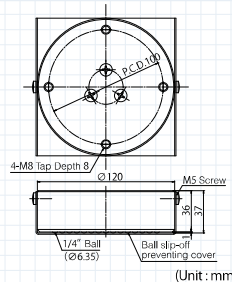


(Unit : mm)

Allowable load	784N(80kgf)	Small ball	SUS440C	Middle ring	SUS303
Max. load	1,568N(160kgf)	Body (cover)	SUS303		
Weight	327g	Ball seat	SUS440C		
Main ball	SUS440C	Ball seat case	SUS303		

AWS-5-CR

Stainless steel Low-dust grease filled

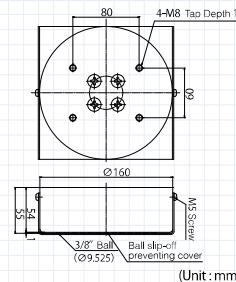


(Unit : mm)

* Electroless nickel-plating				
Allowable load	49,000N(5,000kgf)	Ball seat	SUS440C	
Weight	3,000g			
Ball	SUS440C			
Body (case)	SS400 *			

AWS-8-CR

Stainless steel Low-dust grease filled



(Unit : mm)

* Electroless nickel-plating				
Allowable load	78,400N(8,000kgf)	Ball seat	SUS440C	
Weight	7,000g			
Ball	SUS440C			
Body (case)	SS400 *			

※For materials not contained herein, please contact us. ※Product specifications are subject to change without prior notice. Please contact us for details.
 ※"CR" in model means clean packaging. ※The clean type freebearings adopt the precision washing and clean packaging as standard.

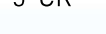
Freebear for clean room

Stainless steel

4-CR



36-5-CR

FREEBEAR 26

Please copy this sheet and fill out the necessary items, and then send it to us by E-MAIL.

Filling date	(month)	(day)	(year)
Your company name		TEL	
Plant name		FAX	
Address	〒		
Filled by		Department	

Conveyance object	Overall and conveying surface shape			
	Size	Max.: Width () mm × Depth () mm × Height () mm		
		Min.: Width () mm × Depth () mm × Height () mm		
	Weight	Max. () kg Min. () kg		
	Conveying surface material			
	Uneven load	☐ Yes ☐ No		
	Temperature	☐ Room temperature ☐ Operating temperature (°C ~ °C)		
	Frequency	☐ Continuous ☐ Intermittent ☐ Only when required		
Speed	☐ Manual ☐ Power-driven ☐ Constant speed			
Use situation and conditions of freebear	Rust-proof	☐ Yes ☐ No		
	Dust-proof	☐ Yes ☐ No		
	Noise reduction	☐ Yes ☐ No		
	Main ball material	☐ Standard (SUSJ2) ☐ SUS ☐ Resin ☐ Other ()※Please specify		
	Body material	☐ Steel ☐ SUS ☐ Resin ☐ Other ()※Please specify		
	Use direction of freebear	☐ Upward ☐ Downward ☐ Other ()		
	Operating environment	☐ Clean room (Class) ☐ Normal environment		
	Grease	☐ Yes (specify or otherwise) ☐ No		
	Packaging	☐ Ordinary packaging ☐ Clean packaging		
	Quantity required	()		

Expected budget		Implementation time	About (month) (year)
Remarks			

*Details need to be arranged in advance.

Please copy this sheet and fill out the necessary items, and then send it to us by E-MAIL.

Filling date	(month)	(day)	(year)
Your company name		TEL	
Plant name		FAX	
Address	〒		
Filled by		Department	

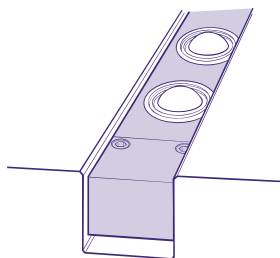
Please fill in the contents under consideration.

Conveyance object	Overall and conveying surface shape		
	Size	Max: Width () mm × Depth ()mm × Height ()mm	
		Min.: Width () mm × Depth ()mm × Height ()mm	
	Weight	Max. () kg Min. () kg	
	Conveying surface material		
	Uneven load	☐ Yes ☐ No	
	Temperature	☐ Room temperature ☐ Operating temperature (°C ~ °C)	
	Frequency	☐ Continuous ☐ Intermittent ☐ Only when required	
Speed	☐ Manual ☐ Power-driven ☐ Constant speed		

Use situation and conditions of freebear		Use situation and conditions of AFU	
Main ball material	☐ SUS	Main ball material	☐ SUS440C
	☐ Resin () ※Please specify the material of resin		☐ Other () ※Please specify
Body material	☐ SUS	Body material	☐ SUS
	☐ Resin		☐ Steel (Electroless nickel-plating)
	☐ Other ()		☐ Aluminum
Use direction of freebear	☐ Upward	Use direction of AFU	☐ Upward
	☐ Downward		☐ Downward
	☐ Other ()		☐ Other ()
Operating environment	☐ Clean room (Class)	Operating environment	☐ Clean room (Class)
	☐ Normal environment		☐ Normal environment
Packaging	☐ Ordinary packaging	AFU size	L= () mm
	☐ Clean packaging		Width = () mm
Quantity required	()	Packaging	Height = () mm
			☐ Ordinary packaging
		☐ Clean packaging	
		Quantity required	()

Expected budget		Implementation time	About (month) (year)
Remarks			

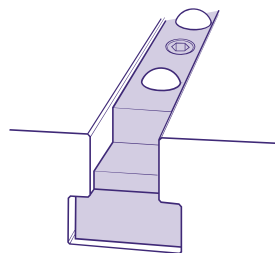
Square groove insertion type freebear unit



By supplying compressed air, the freebears built in individual pistons rise simultaneously.

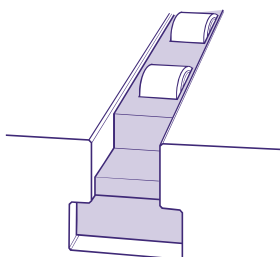
By processing a square groove on the machine bed at the time of mounting, it is possible to convey and position jigs, molds and workpieces.

T-groove insertion type freebear unit



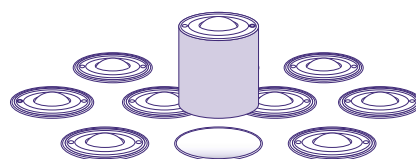
You can use it by inserting it in existing T-groove without the need for square groove processing. It can be inserted only when required or can be freely inserted/extracted, and thus can be conveniently attached onto machines without lifting function.

T-groove insertion type roller unit



The unit with built-in rollers rises and lowers through air pressure. Compared with the freebear unit, the roller has a smaller starting frictional resistance (μ) in the rotational direction and is suitable for the direction turn and right-angle transfer in production line.

Spring cushion type



This type of single freebear can be buried in existing cushion pin hole or hole drilled in the machine bed and is actuated through the spring.

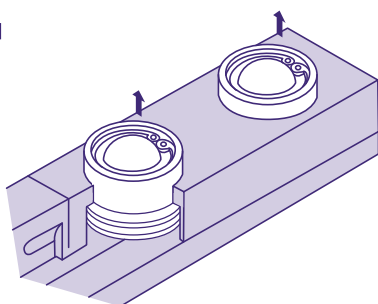
Heavy objects can be freely conveyed and seated

With the ON and OFF of the air valve, the freebears can lift the conveyance object with the force of the air.

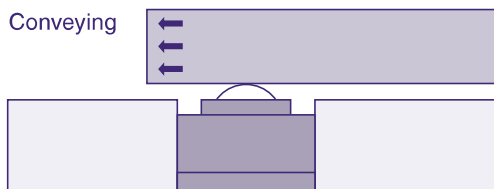
You can easily and quickly convey and accurately position jigs and workpieces with a slight force.

They are very useful in combining with assembly lines, and conveying and setting press molds.

When raised

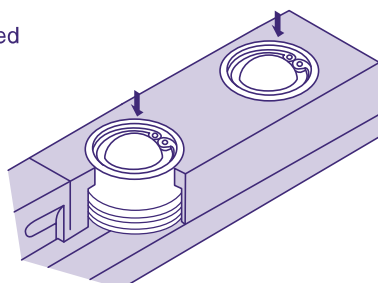


Conveying

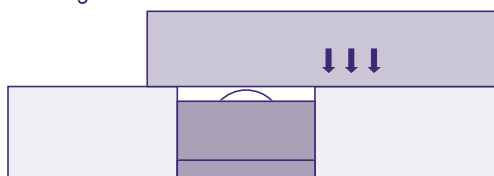


By supplying air to the unit, the built-in freebears rise to lift the conveyance object. When the starting frictional resistance (μ) is less than 3/100, they can freely 360° move the conveyance object.

When lowered

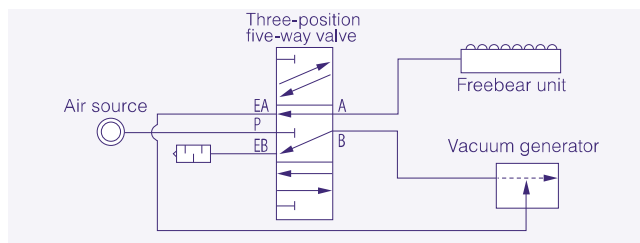
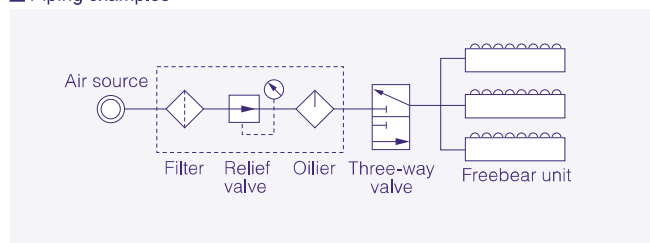


Seating



Once the air supply stops, the conveyance object is seated by its own weight.

Piping examples



※Please use the vacuum generator as shown in the figure below if required to force down the cylinder.

Inquiry Sheet

E-MAIL
overseas-div@freebear.co.jp

Please copy this sheet and fill out the necessary items, and then send it to us by E-MAIL.

Filling date	(month)	(day)	(year)
Your company name			TEL
Plant name			FAX
Address	〒		
Filled by			Department

Press	☐ New ☐ Existing		Qty.		Bolster retrofitting	☐ Yes ☐ No	
	Manufacturer name, Model		Pressing capacity	ton	Operating air pressure	MPa(kg/cm ²)	
	Hole Thickness ()		T-groove		Square groove		
	※Please fill in the measured value of actual size.(Unit: mm)		※Please fill in the measured value of actual size.(Unit: mm)		※Please fill in the measured value of actual size.(Unit: mm)		
Other machines	Please fill in the machines used and their situations.						
Workpiece	Size	Max: Width () mm × Depth () mm × Height () mm					
		Min.: Width () mm × Depth () mm × Height () mm					
	Weight	Max. () kg	Min. () kg	Number of faces			
	Bottom shape	Eg.) Clog shape, etc.		Material			
Use situation and conditions	Setup method	☐ Crane ☐ Forklift or pallet jack ☐ Special truck ☐ Other					
	Persons required	Existing: persons	Setup time	Existing: min	Change frequency	Existing: Times / day	
		Target: persons		Target: min		Target: Times / day	
	AFU fixing	☐ Yes () ☐ No					
	Scrap removing	☐ Yes () ☐ No	Heat-resistant※	☐ Yes (°C) ☐ No			
	Air piping work	☐ Yes ☐ No ☐ Other					
Mold carrying-in direction	☐ Front ☐ Side						
Expected budget			Scheduled time for implementation	About	(Month)	(Day)	(Year)

※Heat-resistant (standard products can be used within 0~60℃)

AFU-2525 series

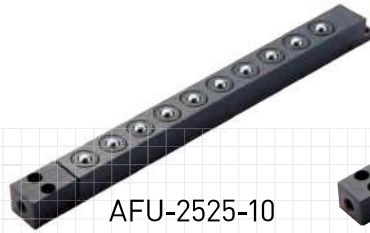


Sizes other than shown below are also available.
Please specify the details in the inquiry sheet of P30.

(Lowered by means of mold weight or forced exhaust)



AFU-2525-5

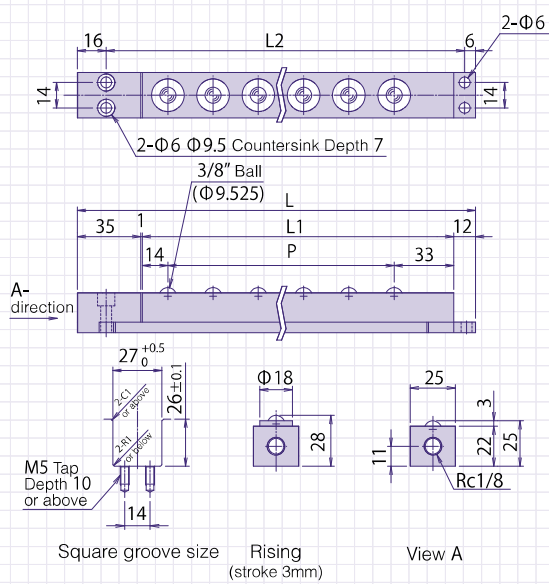


AFU-2525-10

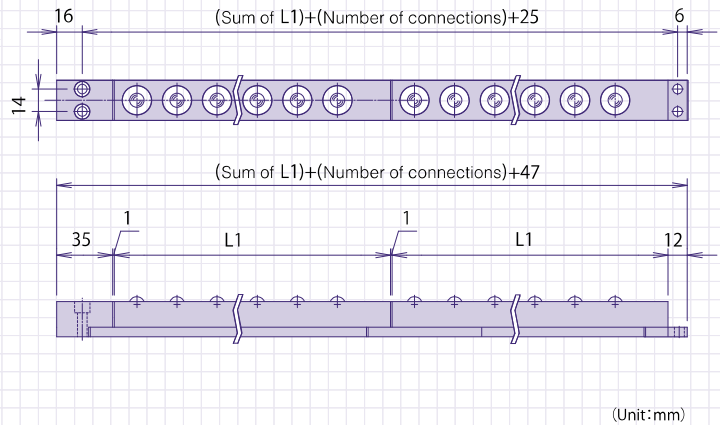


AFU-2525-18

Dimension diagram



Connection dimension diagram



Model	Body size (mm)				Weight (kg)	Relation of air pressure and load capacity kN (kgf)							
	L	L1	L2	P		One piece of AFU				One freebear			
						Operating air pressure MPa (kgf/cm ²)				Operating air pressure MPa (kgf/cm ²)			
						0.30 (3.1)	0.40 (4.1)	0.50 (5.1)	0.60 (6.1)	0.30 (3.1)	0.40 (4.1)	0.50 (5.1)	0.60 (6.1)
AFU-2525-1	95	47	73	—	0.3	0.07 (7.2)	0.09 (9.2)	0.12 (12.3)	0.14 (14.3)	0.07 (7.2)	0.09 (9.2)	0.12 (12.3)	0.14 (14.3)
AFU-2525-2	120	72	98	25	0.4	0.14 (14.3)	0.18 (18.4)	0.24 (24.6)	0.28 (28.6)				
AFU-2525-3	145	97	123	2 × P25 = 50	0.5	0.21 (21.5)	0.27 (27.6)	0.36 (36.9)	0.42 (42.9)				
AFU-2525-4	170	122	148	3 × P25 = 75	0.6	0.28 (28.6)	0.36 (36.8)	0.48 (49.2)	0.56 (57.2)				
AFU-2525-5	195	147	173	4 × P25 = 100	0.7	0.35 (35.8)	0.45 (46.0)	0.60 (61.5)	0.70 (71.5)				
AFU-2525-6	220	172	198	5 × P25 = 125	0.8	0.42 (42.9)	0.54 (55.2)	0.72 (73.8)	0.84 (85.8)				
AFU-2525-7	245	197	223	6 × P25 = 150	0.9	0.49 (50.1)	0.63 (64.4)	0.84 (86.1)	0.98 (100.1)				
AFU-2525-8	270	222	248	7 × P25 = 175	1.0	0.56 (57.2)	0.72 (73.6)	0.96 (98.4)	1.12 (114.4)				
AFU-2525-9	295	247	273	8 × P25 = 200	1.1	0.63 (64.4)	0.81 (82.8)	1.08 (110.7)	1.26 (128.7)				
AFU-2525-10	320	272	298	9 × P25 = 225	1.2	0.70 (71.5)	0.90 (92.0)	1.20 (123.0)	1.40 (143.0)				
AFU-2525-11	345	297	323	10 × P25 = 250	1.3	0.77 (78.7)	0.99 (101.2)	1.32 (135.3)	1.54 (157.3)				
AFU-2525-12	370	322	348	11 × P25 = 275	1.4	0.84 (85.8)	1.08 (110.4)	1.44 (147.6)	1.68 (171.6)				
AFU-2525-13	395	347	373	12 × P25 = 300	1.5	0.91 (93.0)	1.17 (119.6)	1.56 (159.9)	1.82 (185.9)				
AFU-2525-14	420	372	398	13 × P25 = 325	1.6	0.98 (100.1)	1.26 (128.8)	1.68 (172.2)	1.96 (200.2)				
AFU-2525-15	445	397	423	14 × P25 = 350	1.7	1.05 (107.3)	1.35 (138.0)	1.80 (184.5)	2.10 (214.5)				
AFU-2525-16	470	422	448	15 × P25 = 375	1.8	1.12 (114.4)	1.44 (147.2)	1.92 (196.8)	2.24 (228.8)				
AFU-2525-17	495	447	473	16 × P25 = 400	1.9	1.19 (121.6)	1.53 (156.4)	2.04 (209.1)	2.38 (243.1)				
AFU-2525-18	520	472	498	17 × P25 = 425	2.0	1.26 (128.5)	1.62 (165.2)	2.16 (220.3)	2.52 (257.0)				

AFU-2743W series

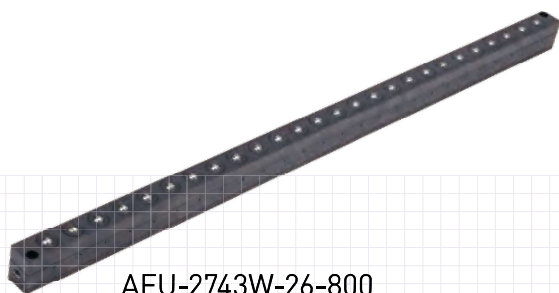
RoHS

CAD

3D

Suitable for hydraulic roller grooves of press machines!
Replacement and mounting is possible without additional bolster machining!

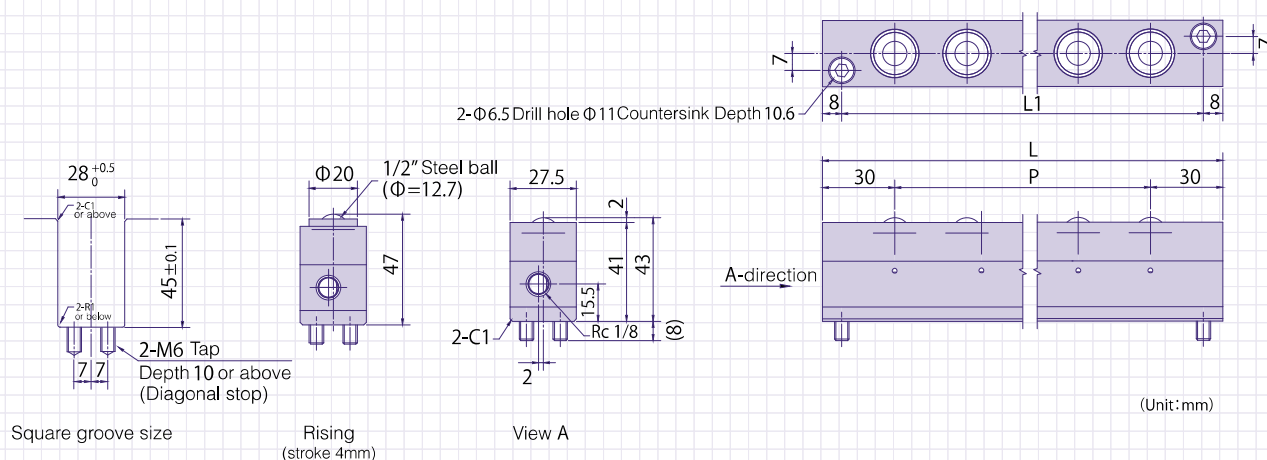
(Lowered by means of mold weight or forced exhaust)



AFU-2743W-26-800

The dimensions can be customized according to the groove dimensions of your press machine.
e.g.) Stroke 4mm → Stroke 3mm
Fixing bolt M6 → Fixing bolt M5
Body height when lowered 43 → Body height when lowered 42
Size L 600L → Size L 630L

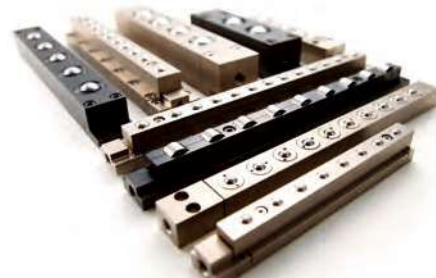
Dimension diagram



Model	Body size (mm)			Weight (kg)	Relation of air pressure and load capacity kN (kgf)							
	L	L1	P ※Evenly distributed		One piece of AFU				One freebear			
					Operating air pressure MPa (kgf/cm ²)				Operating air pressure MPa (kgf/cm ²)			
					0.30 (3.1)	0.40 (4.1)	0.50 (5.1)	0.60 (6.1)	0.30 (3.1)	0.40 (4.1)	0.50 (5.1)	0.60 (6.1)
AFU-2743W-6-200	200	184	5 × P = 140	1.6	1.15 (117.0)	1.52 (156)	1.94 (198)	2.29 (234)	0.19 (19.5)	0.25 (26)	0.32 (33)	0.38 (39)
AFU-2743W-9-300	300	284	8 × P = 240	2.4	1.72 (175.5)	2.29 (234)	2.91 (297)	3.44 (351)				
AFU-2743W-13-400	400	384	12 × P = 340	3.1	2.49 (253.5)	3.31 (338)	4.20 (429)	4.97 (507)				
AFU-2743W-16-500	500	484	15 × P = 440	3.9	3.06 (312.0)	4.07 (416)	5.17 (528)	6.11 (624)				
AFU-2743W-19-600	600	584	18 × P = 540	4.7	3.63 (370.5)	4.84 (494)	6.14 (627)	7.26 (741)				
AFU-2743W-23-700	700	684	22 × P = 640	5.4	4.40 (448.5)	5.86 (598)	7.44 (759)	8.79 (897)				
AFU-2743W-26-800	800	784	25 × P = 740	6.2	4.97 (507.0)	6.62 (676)	8.41 (858)	9.94 (1,014)				
AFU-2743W-29-900	900	884	28 × P = 840	7.0	5.55 (565.5)	7.39 (754)	9.38 (957)	11.09 (1,131)				

Application examples

Application examples of square groove type





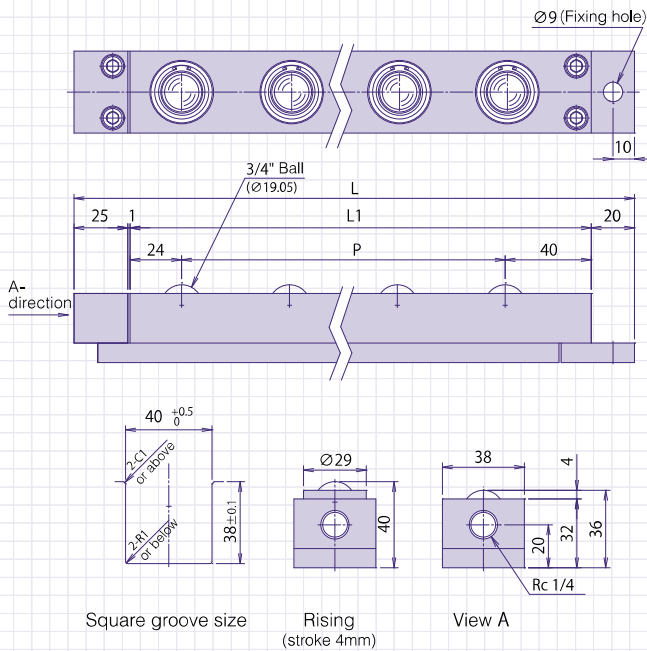
AFU-3836-5



AFU-3836-10

* For the fixing method,
please choose from standard or
4-point fixed type

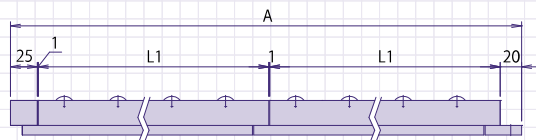
■ **Standard** (fixing method : only Ø9)



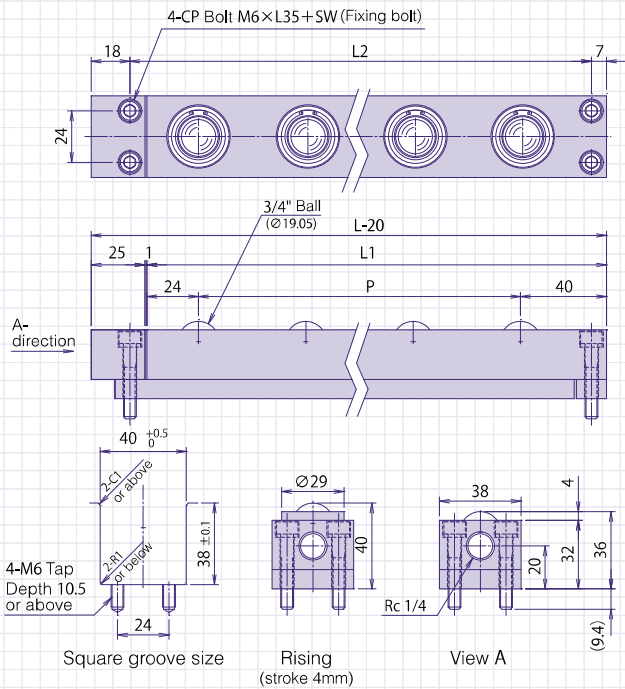
- Connection dimension diagram

AFU-3836 Standard

Calculation formula of full length $A=45+ (\text{Sum of } L1) + (\text{Number of connections})$



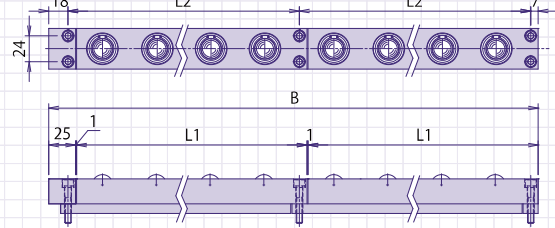
■ **4-point fixed type** (fixing method: fixed with four M6 cap bolts)



■ Connection dimension diagram

AFU-3836 4-point fixing

Calculation formula of full length $B=25+ (\text{Sum of } L1) + (\text{Number of connections})$



(Unit:mm)

Model	Body size (mm)				Weight (kg)	Relation of air pressure and load capacity kN (kgf)							
	L	L1	L2	P		One piece of AFU				One freebear			
						Operating air pressure MPa (kgf/cm ²)				Operating air pressure MPa (kgf/cm ²)			
						0.30 (3.1)	0.40 (4.1)	0.50 (5.1)	0.60 (6.1)	0.30 (3.1)	0.40 (4.1)	0.50 (5.1)	0.60 (6.1)
AFU-3836-1	110	64	65	—	0.8	0.20 (19.9)	0.24 (24.5)	0.31 (31.6)	0.39 (39.8)	0.20 (19.9)	0.24 (24.5)	0.31 (31.6)	0.39 (39.8)
AFU-3836-2	160	114	115	50	1.2	0.39 (39.8)	0.48 (48.9)	0.62 (63.2)	0.78 (79.5)				
AFU-3836-3	210	164	165	2 × P50 = 100	1.7	0.59 (59.7)	0.72 (73.4)	0.93 (94.8)	1.17 (119.3)				
AFU-3836-4	260	214	215	3 × P50 = 150	2.1	0.78 (79.6)	0.96 (97.9)	1.24 (126.4)	1.56 (159.1)				
AFU-3836-5	310	264	265	4 × P50 = 200	2.5	0.98 (99.4)	1.20 (122.4)	1.55 (158.1)	1.95 (198.8)				
AFU-3836-6	360	314	315	5 × P50 = 250	3.0	1.17 (119.3)	1.44 (146.8)	1.86 (189.7)	2.34 (238.6)				
AFU-3836-7	410	364	365	6 × P50 = 300	3.4	1.37 (139.2)	1.68 (171.3)	2.17 (221.3)	2.73 (278.4)				
AFU-3836-8	460	414	415	7 × P50 = 350	3.8	1.56 (159.1)	1.92 (195.8)	2.48 (252.9)	3.12 (318.2)				
AFU-3836-9	510	464	465	8 × P50 = 400	4.3	1.76 (179.0)	2.16 (220.3)	2.79 (284.5)	3.51 (357.9)				
AFU-3836-10	560	514	515	9 × P50 = 450	4.7	1.95 (198.9)	2.40 (244.7)	3.10 (316.1)	3.90 (397.7)				
AFU-3836-11	610	564	565	10 × P50 = 500	5.1	2.15 (218.8)	2.64 (269.2)	3.41 (347.7)	4.29 (437.5)				
AFU-3836-12	660	614	615	11 × P50 = 550	5.5	2.34 (238.6)	2.88 (293.7)	3.72 (379.3)	4.68 (477.2)				
AFU-3836-13	710	664	665	12 × P50 = 600	6.0	2.54 (258.5)	3.12 (318.2)	4.03 (411.0)	5.07 (517.0)				
AFU-3836-14	760	714	715	13 × P50 = 650	6.4	2.73 (278.4)	3.36 (342.6)	4.34 (442.6)	5.46 (556.8)				
AFU-3836-15	810	764	765	14 × P50 = 700	6.8	2.93 (298.3)	3.60 (367.1)	4.65 (474.2)	5.85 (596.5)				
AFU-3836-16	860	814	815	15 × P50 = 750	7.3	3.12 (318.2)	3.84 (391.6)	4.96 (505.8)	6.24 (636.3)				
AFU-3836-17	910	864	865	16 × P50 = 800	7.7	3.32 (338.1)	4.08 (416.0)	5.27 (537.4)	6.63 (676.1)				
AFU-3836-18	960	914	915	17 × P50 = 850	8.1	3.51 (357.9)	4.32 (440.5)	5.58 (569.0)	7.02 (715.8)				

* The load capacity of standard product is the same as 4-point fixed type. ** The body size (L) of 4-point fixed type is 20mm smaller than standard product.

3836AL-series

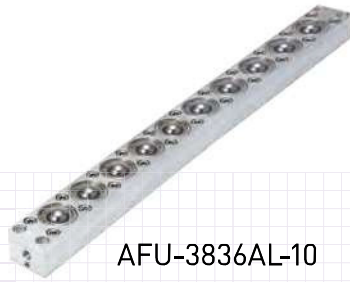


Sizes other than shown below are also available.
Please specify the details in the inquiry sheet of P30.

(Lowered by means of mold weight or forced exhaust)
(Aluminum body, light-weight type)

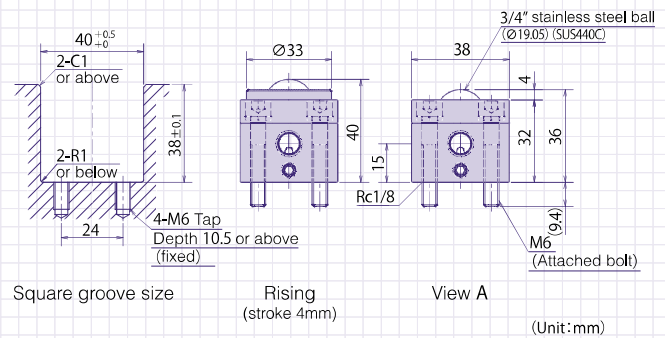
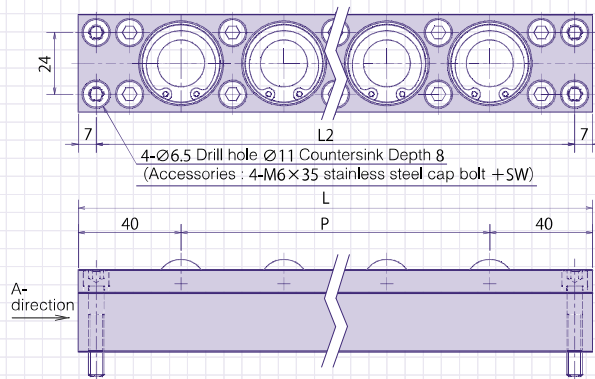


AFU-3836AL-5



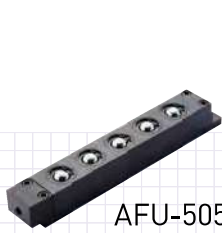
AFU-3836AL-10

4-point fixed type

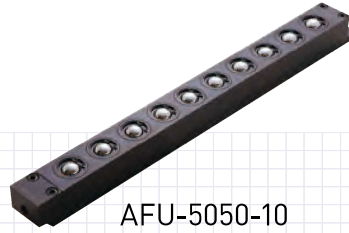


(Unit:mm)

Model	Body size (mm)			Weight (kg)	Relation of air pressure and load capacity kN (kgf)							
	L	L2	P		One piece of AFU				One freebear			
					Operating air pressure MPa (kgf/cm ²)				Operating air pressure MPa (kgf/cm ²)			
					0.30 (3.1)	0.40 (4.1)	0.50 (5.1)	0.60 (6.1)	0.30 (3.1)	0.40 (4.1)	0.50 (5.1)	0.60 (6.1)
AFU-3836AL-1	80	66	—	0.4	0.24 (24.0)	0.31 (32)	0.39 (40)	0.47 (48)	0.24 (24)	0.31 (32)	0.39 (40)	0.47 (48)
AFU-3836AL-2	120	106	40	0.6	0.47 (48.0)	0.62 (63)	0.78 (80)	0.94 (96)				
AFU-3836AL-3	160	146	2 × P40 = 80	0.8	0.71 (72.0)	0.93 (95)	1.17 (119)	1.41 (144)				
AFU-3836AL-4	200	186	3 × P40 = 120	1.0	0.94 (96.0)	1.24 (126)	1.56 (159)	1.88 (192)				
AFU-3836AL-5	240	226	4 × P40 = 160	1.2	1.18 (120.0)	1.55 (158)	1.95 (199)	2.35 (240)				
AFU-3836AL-6	280	266	5 × P40 = 200	1.4	1.41 (144.0)	1.86 (190)	2.34 (239)	2.82 (288)				
AFU-3836AL-7	320	306	6 × P40 = 240	1.6	1.65 (167.5)	2.17 (221)	2.73 (278)	3.29 (335)				
AFU-3836AL-8	360	346	7 × P40 = 280	1.8	1.88 (191.5)	2.48 (253)	3.12 (318)	3.76 (383)				
AFU-3836AL-9	400	386	8 × P40 = 320	2.0	2.12 (215.5)	2.79 (285)	3.51 (358)	4.23 (431)				
AFU-3836AL-10	440	426	9 × P40 = 360	2.2	2.35 (239.5)	3.10 (316)	3.90 (398)	4.70 (479)				
AFU-3836AL-11	480	466	10 × P40 = 400	2.4	2.59 (263.5)	3.41 (348)	4.29 (437)	5.17 (527)				
AFU-3836AL-12	520	506	11 × P40 = 440	2.6	2.82 (287.5)	3.72 (379)	4.68 (477)	5.64 (575)				
AFU-3836AL-13	560	546	12 × P40 = 480	2.8	3.06 (311.5)	4.03 (411)	5.07 (517)	6.11 (623)				
AFU-3836AL-14	600	586	13 × P40 = 520	3.0	3.29 (335.5)	4.34 (443)	5.46 (557)	6.58 (671)				
AFU-3836AL-15	640	626	14 × P40 = 560	3.3	3.53 (359.5)	4.65 (474)	5.85 (597)	7.05 (719)				
AFU-3836AL-16	680	666	15 × P40 = 600	3.5	3.76 (383.5)	4.96 (506)	6.24 (636)	7.52 (767)				
AFU-3836AL-17	720	706	16 × P40 = 640	3.7	4.00 (407.5)	5.27 (537)	6.63 (676)	7.99 (815)				
AFU-3836AL-18	760	746	17 × P40 = 680	3.9	4.23 (431.5)	5.58 (569)	7.02 (716)	8.46 (863)				
AFU-3836AL-19	800	786	18 × P40 = 720	4.1	4.47 (455.5)	5.89 (601)	7.41 (756)	8.93 (911)				
AFU-3836AL-20	840	826	19 × P40 = 760	4.3	4.70 (479.5)	6.20 (632)	7.80 (795)	9.40 (959)				
AFU-3836AL-21	880	866	20 × P40 = 800	4.5	4.94 (503.0)	6.51 (664)	8.19 (835)	9.87 (1,006)				
AFU-3836AL-22	920	906	21 × P40 = 840	4.7	5.17 (527.0)	6.82 (695)	8.58 (875)	10.34 (1,054)				
AFU-3836AL-23	960	946	22 × P40 = 880	4.9	5.41 (551.0)	7.13 (727)	8.97 (915)	10.81 (1,102)				
AFU-3836AL-24	1,000	986	23 × P40 = 920	5.1	5.64 (575.0)	7.44 (759)	9.36 (954)	11.28 (1,150)				
AFU-3836AL-25	1,040	1,026	24 × P40 = 960	5.3	5.88 (599.0)	7.75 (790)	9.75 (994)	11.75 (1,198)				
AFU-3836AL-26	1,080	1,066	25 × P40 = 1,000	5.5	6.11 (623.0)	8.06 (822)	10.14 (1,034)	12.22 (1,246)				



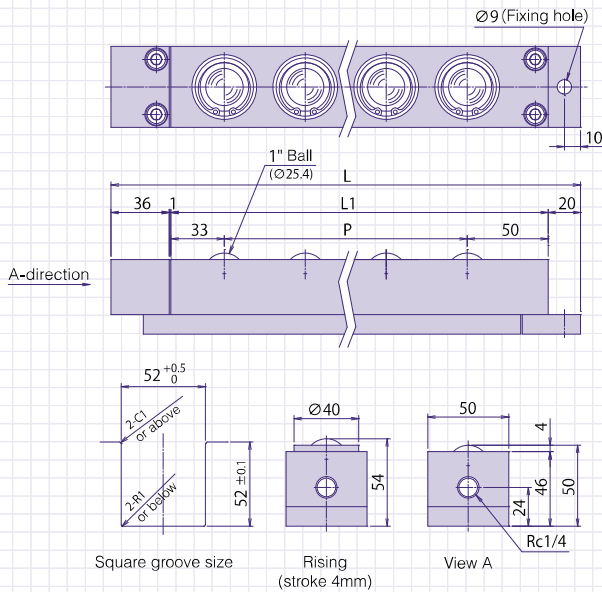
AFU-5050-5



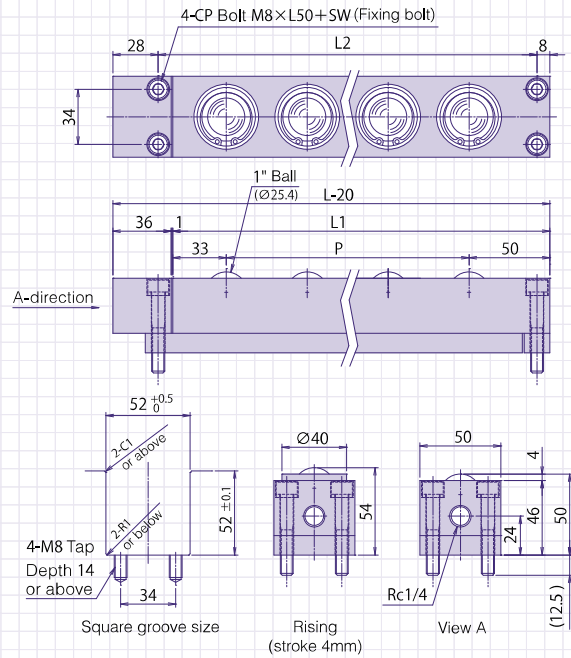
AFU-5050-10

* For the fixing method,
please choose from standard
or 4-point fixed type

■ Standard (fixing method : only Ø9)



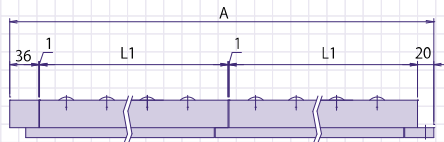
■ 4-point fixed type (fixing method: fixed with four M8 cap bolts)



■ Connection dimension diagram

AFU-5050 Standard

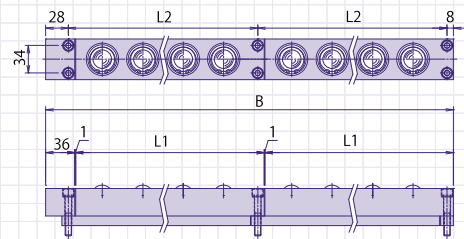
Calculation formula of full length A=56+ (Sum of L1) + (Number of connections)



■ Connection dimension diagram

AFU-5050 4-point fixing

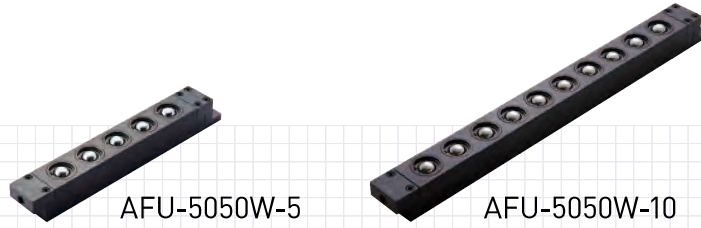
Calculation formula of full length B=36+ (Sum of L1) + (Number of connections)



(Unit:mm)

Model	Body size (mm)				Weight (kg)	Relation of air pressure and load capacity kN (kgf)							
	L	L1	L2	P		One piece of AFU				One freebear			
						Operating air pressure MPa (kgf/cm ²)				Operating air pressure MPa (kgf/cm ²)			
						0.30 (3.1)	0.40 (4.1)	0.50 (5.1)	0.60 (6.1)	0.30 (3.1)	0.40 (4.1)	0.50 (5.1)	0.60 (6.1)
AFU-5050-1	140	83	84	—	2.0	0.39 (39.3)	0.51 (52.0)	0.64 (65.3)	0.77 (78.5)	0.39 (39.3)	0.51 (52.0)	0.64 (65.3)	0.77 (78.5)
AFU-5050-2	190	133	134	50	2.8	0.77 (78.5)	1.02 (104.0)	1.28 (130.5)	1.54 (157.0)				
AFU-5050-3	240	183	184	2 × P50 = 100	3.6	1.16 (117.8)	1.53 (156.0)	1.92 (195.8)	2.31 (235.6)				
AFU-5050-4	290	233	234	3 × P50 = 150	4.5	1.54 (157.1)	2.04 (208.0)	2.56 (261.0)	3.08 (314.1)				
AFU-5050-5	340	283	284	4 × P50 = 200	5.3	1.93 (196.3)	2.55 (260.0)	3.20 (326.3)	3.85 (392.6)				
AFU-5050-6	390	333	334	5 × P50 = 250	6.1	2.31 (235.6)	3.06 (312.0)	3.84 (391.6)	4.62 (471.1)				
AFU-5050-7	440	383	384	6 × P50 = 300	6.9	2.70 (274.8)	3.57 (364.0)	4.48 (456.8)	5.39 (549.6)				
AFU-5050-8	490	433	434	7 × P50 = 350	7.7	3.08 (314.1)	4.08 (416.0)	5.12 (522.1)	6.16 (628.1)				
AFU-5050-9	540	483	484	8 × P50 = 400	8.6	3.47 (353.4)	4.59 (468.0)	5.76 (587.4)	6.93 (706.7)				
AFU-5050-10	590	533	534	9 × P50 = 450	9.4	3.85 (392.6)	5.10 (520.1)	6.40 (652.6)	7.70 (785.2)				
AFU-5050-11	640	583	584	10 × P50 = 500	10.2	4.24 (431.9)	5.61 (572.1)	7.04 (717.9)	8.47 (863.7)				
AFU-5050-12	690	633	634	11 × P50 = 550	11.0	4.62 (471.1)	6.12 (624.1)	7.68 (783.1)	9.24 (942.2)				
AFU-5050-13	740	683	684	12 × P50 = 600	11.8	5.01 (510.4)	6.63 (676.1)	8.32 (848.4)	10.01 (1,020.7)				
AFU-5050-14	790	733	734	13 × P50 = 650	12.6	5.39 (549.7)	7.14 (728.1)	8.96 (913.7)	10.78 (1,099.3)				
AFU-5050-15	840	783	784	14 × P50 = 700	13.4	5.78 (588.9)	7.65 (780.1)	9.60 (978.9)	11.55 (1,177.8)				
AFU-5050-16	890	833	834	15 × P50 = 750	14.3	6.16 (628.2)	8.16 (832.1)	10.24 (1,044.2)	12.32 (1,256.3)				
AFU-5050-17	940	883	884	16 × P50 = 800	15.1	6.55 (667.4)	8.67 (884.1)	10.88 (1,109.5)	13.09 (1,334.8)				
AFU-5050-18	990	933	934	17 × P50 = 850	15.9	6.93 (706.7)	9.18 (936.1)	11.52 (1,174.7)	13.86 (1,413.3)				

* The load capacity of standard product is the same as 4-point fixed type. ** The body size (L) of 4-point fixed type is 20mm smaller than standard product.

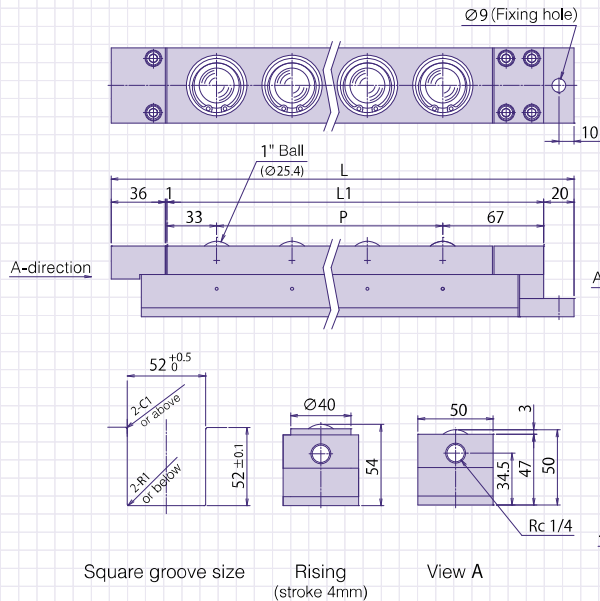


AFU-5050W-5

AFU-5050W-10

* For the fixing method,
please choose from standard
or 4-point fixed type

■ Standard (fixing method : only Ø9)

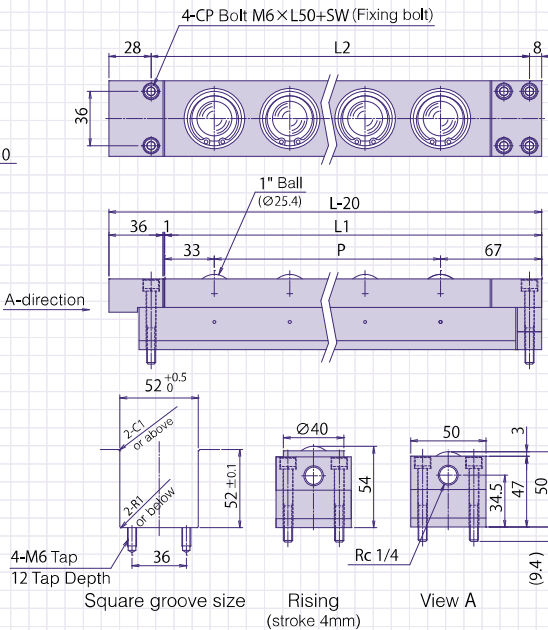


Square groove size

Rising
(stroke 4mm)

View A

■ 4-point fixed type (fixing method: fixed with four M6 cap bolts)



Square groove size

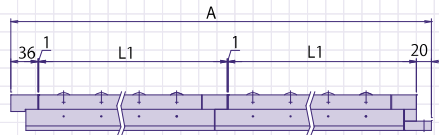
Rising
(stroke 4mm)

View A

■ Connection dimension diagram

AFU-5050W Standard

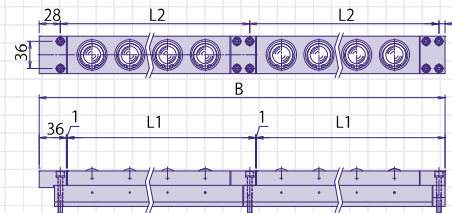
Calculation formula of full length A=36+ (Sum of L1) + (Number of connections)



■ Connection dimension diagram

AFU-5050W 4-point fixing

Calculation formula of full length B=36+ (Sum of L1) + (Number of connections)



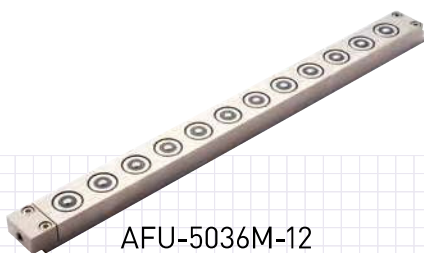
(Unit: mm)

Model	Body size (mm)				Weight (kg)	Relation of air pressure and load capacity kN (kgf)							
	L	L1	L2	P		One piece of AFU				One freebear			
						Operating air pressure MPa (kgf/cm ²)				Operating air pressure MPa (kgf/cm ²)			
						0.30 (3.1)	0.40 (4.1)	0.50 (5.1)	0.60 (6.1)	0.30 (3.1)	0.40 (4.1)	0.50 (5.1)	0.60 (6.1)
AFU-5050W-1	157	100	101	—	2.1	0.77 (78.0)	1.02 (104.0)	1.28 (130.5)	1.53 (156.0)	0.77 (78.0)	1.02 (104.0)	1.28 (130.5)	1.53 (156.0)
AFU-5050W-2	207	150	151	50	2.9	1.53 (156.0)	2.04 (208.0)	2.56 (261.0)	3.06 (312.0)				
AFU-5050W-3	257	200	201	2 × P50 = 100	3.6	2.30 (234.0)	3.06 (312.0)	3.84 (391.6)	4.59 (468.0)				
AFU-5050W-4	307	250	251	3 × P50 = 150	4.4	3.06 (312.1)	4.08 (416.0)	5.12 (522.1)	6.12 (624.1)				
AFU-5050W-5	357	300	301	4 × P50 = 200	5.2	3.83 (390.1)	5.10 (520.1)	6.40 (652.6)	7.65 (780.1)				
AFU-5050W-6	407	350	351	5 × P50 = 250	5.9	4.59 (468.1)	6.12 (624.1)	7.68 (783.1)	9.18 (936.1)				
AFU-5050W-7	457	400	401	6 × P50 = 300	6.6	5.36 (546.1)	7.14 (728.1)	8.96 (913.7)	10.71 (1,092.1)				
AFU-5050W-8	507	450	451	7 × P50 = 350	7.4	6.12 (624.1)	8.16 (832.1)	10.24 (1,044.2)	12.24 (1,248.1)				
AFU-5050W-9	557	500	501	8 × P50 = 400	8.1	6.89 (702.0)	9.18 (936.1)	11.52 (1,174.7)	13.77 (1,404.0)				
AFU-5050W-10	607	550	551	9 × P50 = 450	8.9	7.65 (780.1)	10.20 (1,040.1)	12.80 (1,305.2)	15.30 (1,560.2)				
AFU-5050W-11	657	600	601	10 × P50 = 500	9.7	8.42 (858.1)	11.22 (1,144.1)	14.08 (1,435.8)	16.83 (1,716.2)				
AFU-5050W-12	707	650	651	11 × P50 = 550	10.4	9.18 (936.1)	12.24 (1,248.1)	15.36 (1,566.3)	18.36 (1,872.1)				
AFU-5050W-13	757	700	701	12 × P50 = 600	11.2	9.95 (1,014.1)	13.26 (1,352.1)	16.64 (1,696.8)	19.89 (2,028.2)				
AFU-5050W-14	807	750	751	13 × P50 = 650	12.0	10.71 (1,092.1)	14.28 (1,456.1)	17.92 (1,827.3)	21.42 (2,184.2)				
AFU-5050W-15	857	800	801	14 × P50 = 700	12.7	11.48 (1,170.1)	15.30 (1,560.2)	19.20 (1,957.8)	22.95 (2,340.2)				
AFU-5050W-16	907	850	851	15 × P50 = 750	13.5	12.24 (1,248.2)	16.32 (1,664.2)	20.48 (2,088.4)	24.48 (2,496.3)				
AFU-5050W-17	957	900	901	16 × P50 = 800	14.2	13.01 (1,326.2)	17.34 (1,768.2)	21.76 (2,218.9)	26.01 (2,652.3)				
AFU-5050W-18	1,007	950	951	17 × P50 = 850	15.0	13.77 (1,404.2)	18.36 (1,872.2)	23.04 (2,349.4)	27.54 (2,808.3)				

* The load capacity of standard product is the same as 4-point fixed type. ** The body size (L) of 4-point fixed type is 20mm smaller than standard product.

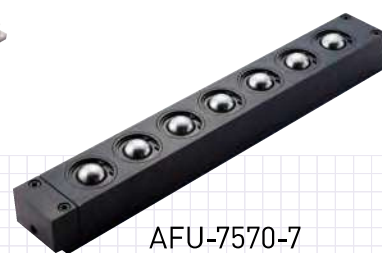


AFU-3232-14



AFU-5036M-12

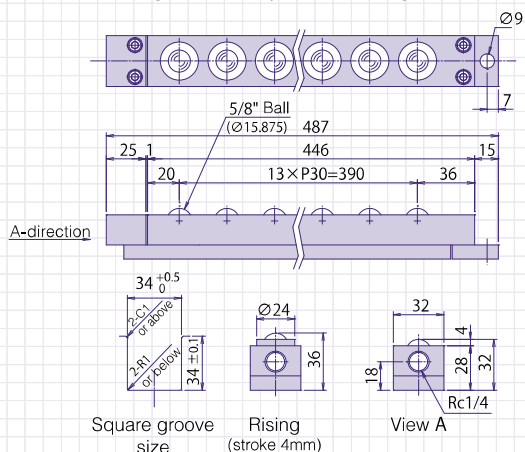
(Rust and dust-proof type)



AFU-7570-7

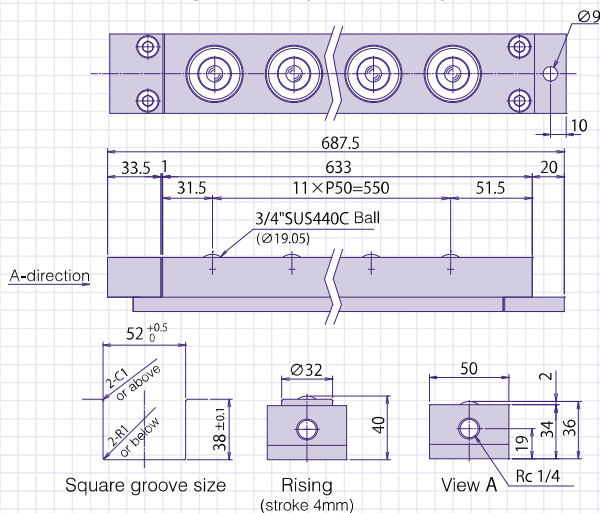
■ AFU-3232-14

Dimension diagram (Lowered by means of mold weight or forced exhaust)

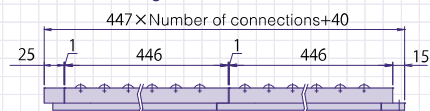


■ AFU-5036M-12

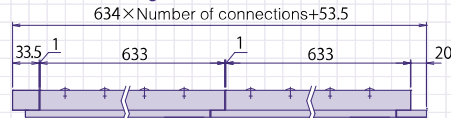
Dimension diagram (Lowered by means of mold weight or forced exhaust)



Connection dimension diagram

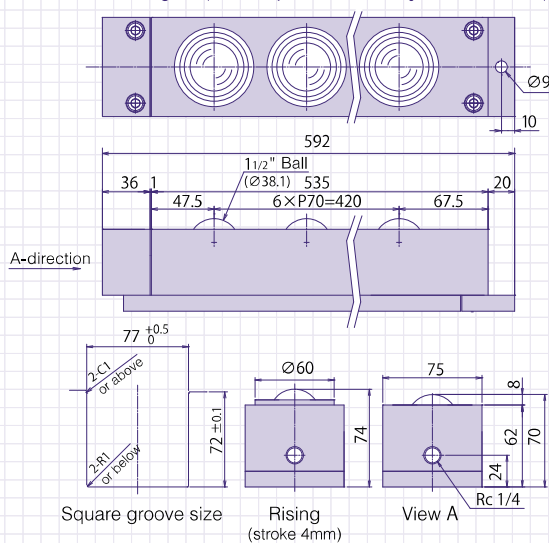


Connection dimension diagram

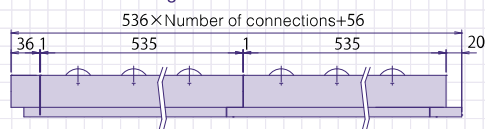


■ AFU-7570-7

Dimension diagram (Lowered by means of mold weight or forced exhaust)

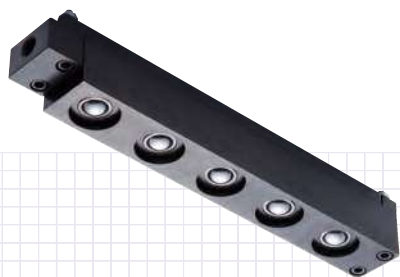


Connection dimension diagram

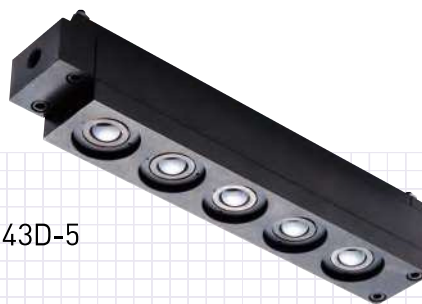


(Unit: mm)

Model	Weight (kg)	Relation of air pressure and load capacity kN (kgf)							
		One piece of AFU				One freebear			
		Operating air pressure MPa (kgf/cm ²)				Operating air pressure MPa (kgf/cm ²)			
AFU-3232-14	3.0	0.30 (3.1)	0.40 (4.1)	0.50 (5.1)	0.60 (6.1)	0.30 (3.1)	0.40 (4.1)	0.50 (5.1)	0.60 (6.1)
AFU-5036M-12	7.4	1.68 (171.3)	2.24 (228.4)	2.80 (285.5)	3.36 (342.6)	0.12 (12.25)	0.16 (16.3)	0.20 (20.4)	0.24 (24.5)
AFU-7570-7	19.4	2.34 (238.6)	2.88 (293.7)	3.72 (379.3)	4.68 (477.2)	0.195 (19.9)	0.24 (24.5)	0.31 (31.6)	0.39 (39.8)
		5.60 (571.1)	7.42 (756.6)	9.31 (949.4)	11.2 (1,142.1)	0.80 (81.6)	1.06 (108.1)	1.33 (135.6)	1.60 (163.2)

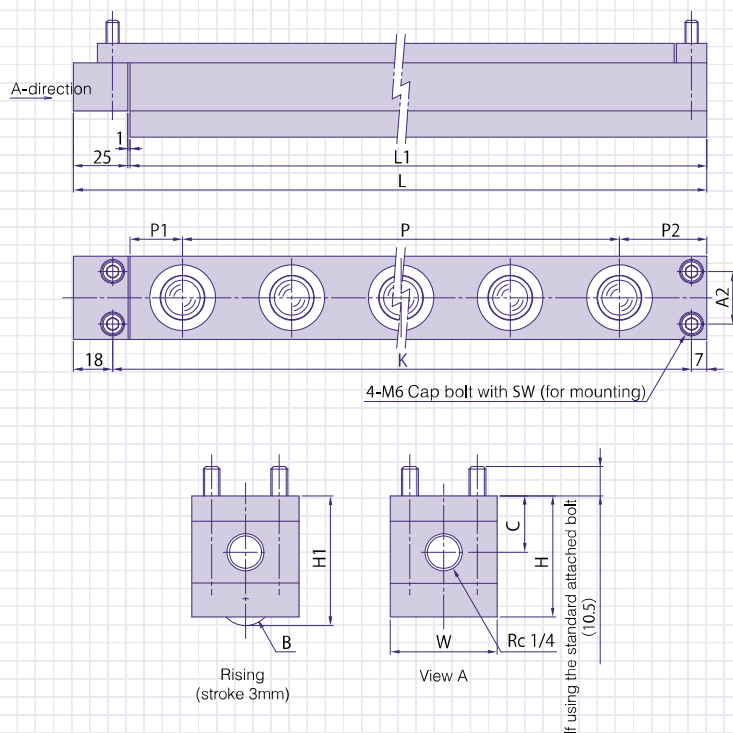


AFU-3843D-5



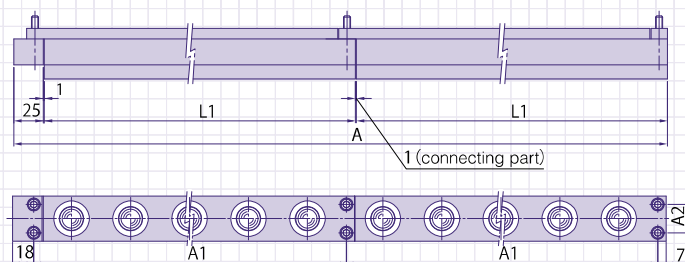
AFU-5057D-5

■ AFU-3843D / AFU-5057D



Calculation formula of full length $A = 25 + (\text{Sum of } L1) + (\text{Number of connections})$

※The same series can be connected with each other. 3843 series cannot be connected with 5057 series.



(Unit:mm)

Model	Body size (mm)											Weight (kg)	Relation of air pressure and load capacity kN (kgf)							
	H	H1	W	C	L	L1	P	P1	P2	A1	A2		One piece of AFU				One freebear			
													Operating air pressure MPa (kgf/cm ²)				Operating air pressure MPa (kgf/cm ²)			
AFU-3843D-5							4 × P50 = 200					3.2	0.30 (3.1)	0.40 (4.1)	0.50 (5.1)	0.60 (6.1)	0.30 (3.1)	0.40 (4.1)	0.50 (5.1)	0.60 (6.1)
AFU-3843D-10	43	46	38	20	290	264	9 × P50 = 450	24	40	265	24	6.0	0.98 (99.4)	1.15 (117.3)	1.55 (158.1)	1.95 (198.8)	0.20	0.23	0.31	0.39
AFU-5057D-5					540	514				515			1.95 (198.9)	2.30 (234.5)	3.10 (316.1)	3.90 (397.7)	(19.9)	(23.5)	(31.6)	(39.8)
AFU-5057D-10	57	60	50	25	300	274	4 × P50 = 200	28	46	275	34	5.8	1.75 (178.5)	2.35 (239.6)	2.90 (295.7)	3.50 (356.9)	0.35	0.47	0.58	0.70
					550	524	9 × P50 = 450			525		10.0	3.50 (356.9)	4.70 (479.3)	5.80 (591.4)	7.00 (713.8)	(35.7)	(47.9)	(59.1)	(71.4)

1625-series

For 18-wide groove

RoHS

CAD

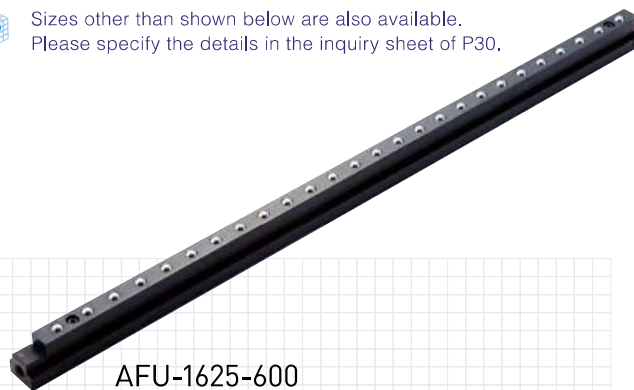
3D

Sizes other than shown below are also available.
Please specify the details in the inquiry sheet of P30.

(Lowered by means of mold weight or forced exhaust)

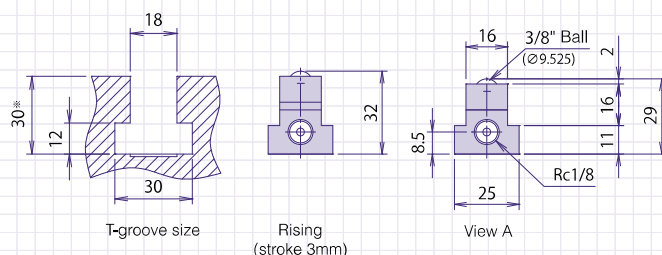
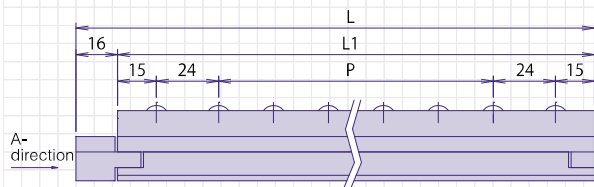
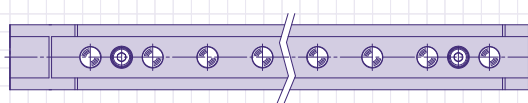


AFU-1625-200



AFU-1625-600

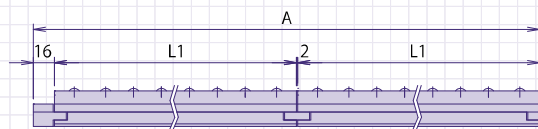
■ AFU-1625 (For 18-wide groove)



※If the T-groove is deeper than 30mm, you need to adjust the height by installing a spacer underneath the AFU.
In such case, make sure that the ball extrudes 2mm from the upper surface of the bolster when the AFU rises.
We can provide various types of spacers.

Calculation formula of full length $A=14+(\text{Sum of } L1) + (2 \times \text{Number of connections})$

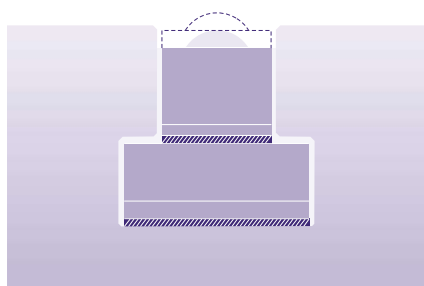
※The same series can be connected with each other.



(Unit:mm)

Model	Body size (mm)			Weight (kg)	Relation of air pressure and load capacity kN (kgf)			
	L	L1	P		One piece of AFU			
					Operating air pressure MPa (kgf/cm ²)			
					0.30 (3.1)	0.40 (4.1)	0.50 (5.1)	0.60 (6.1)
AFU-1625-200	200	184	5 × P21.2 = 106	0.8	0.36 (36.2)	0.47 (47.9)	0.59 (60.2)	0.71 (72.4)
AFU-1625-600	600	584	23 × P22 = 506	2.2	1.24 (126.0)	1.65 (170.3)	2.06 (210.1)	2.47 (251.9)

Easy to use without the need for large-scale construction



The T-groove type can be used by inserting into existing T-groove without the need for square groove processing.

The height and width are adjustable, saving time and cost for machine processing.

If the T groove is too deep, please insert a spacer (shim) in the  part to adjust the height before use.

(Common to T-groove insertion type.) ※Shims are available from us (paid)

1932-series For 22-wide groove

2544-series For 28-wide groove

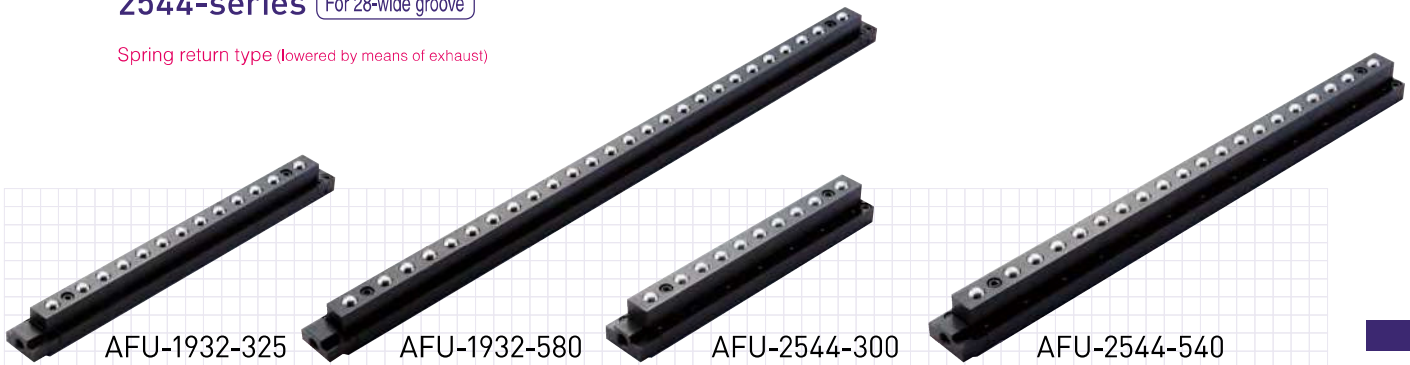
RoHS

CAD

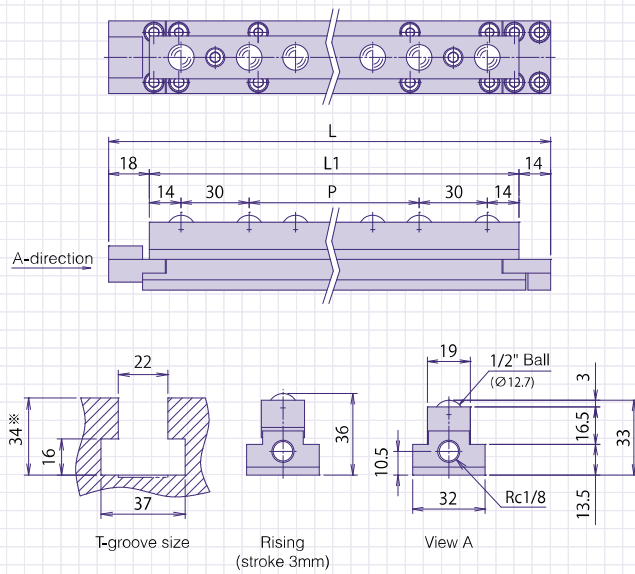
3D

Sizes other than shown below are also available.
Please specify the details in the inquiry sheet of P30.

Spring return type (lowered by means of exhaust)



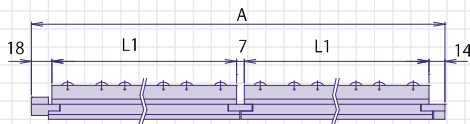
■ AFU-1932 (For 22-wide groove)



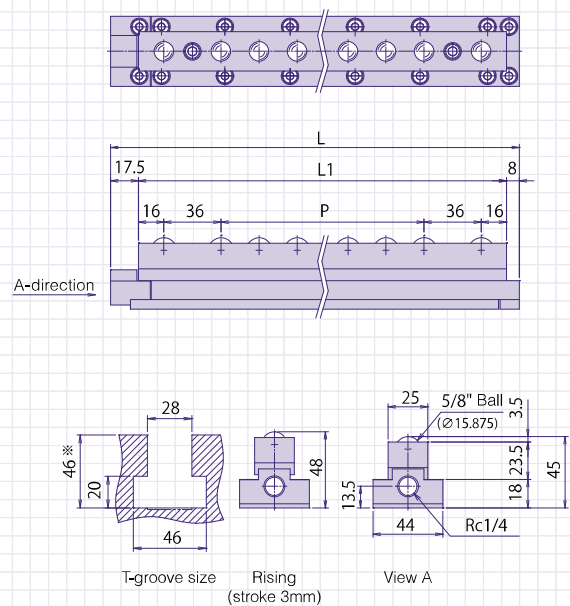
※If the T-groove is deeper than 34mm, you need to adjust the height by installing a spacer underneath the AFU. In such case, make sure that the ball extrudes 2mm from the upper surface of the bolster when the AFU rises.
We can provide various types of spacers.

Calculation formula of full length $A = 25 + (\text{Sum of } L1) + (7 \times \text{Number of connections})$

※The same series can be connected with each other.



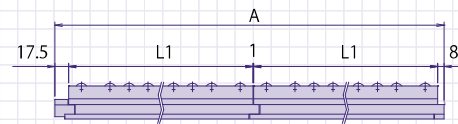
■ AFU-2544 (For 28-wide groove)



※If the T-groove is deeper than 46mm, you need to adjust the height by installing a spacer underneath the AFU. In such case, make sure that the ball extrudes 2mm from the upper surface of the bolster when the AFU rises.
We can provide various types of spacers.

Calculation formula of full length $A = 24.5 + (\text{Sum of } L1) + (\text{Number of connections})$

※The same series can be connected with each other.



(Unit: mm)

Model	Body size (mm)			Weight (kg)	Relation of air pressure and load capacity kN (kgf)			
	L	L1	P		One piece of AFU			
					Operating air pressure MPa (kgf/cm ²)			
					0.30 (3.1)	0.40 (4.1)	0.50 (5.1)	0.60 (6.1)
AFU-1932-325	325	293	10 × P20.5 = 205	1.5	0.98 (100.0)	1.18 (120.3)	1.57 (160.1)	1.96 (199.9)
AFU-1932-580	580	548	23 × P20 = 460	2.6	1.96 (199.9)	2.36 (240.7)	3.14 (320.2)	3.92 (399.7)
AFU-1932-680	680	648	28 × P20 = 560	3.1	2.21 (224.9)	2.65 (270.2)	3.53 (360.0)	4.41 (449.7)
AFU-2544-300	297.5	272	7 × P24 = 168	2.6	1.23 (124.9)	1.47 (149.9)	1.96 (199.9)	2.45 (249.8)
AFU-2544-540	537.5	512	17 × P24 = 408	4.8	2.46 (250.1)	2.94 (299.8)	3.92 (399.8)	4.91 (500.1)
AFU-2544-680	681.5	656	23 × P24 = 552	6	3.07 (312.6)	3.68 (375.3)	4.90 (499.7)	6.13 (625.1)

1832-series For 22-wide groove

2444-series For 28-wide groove

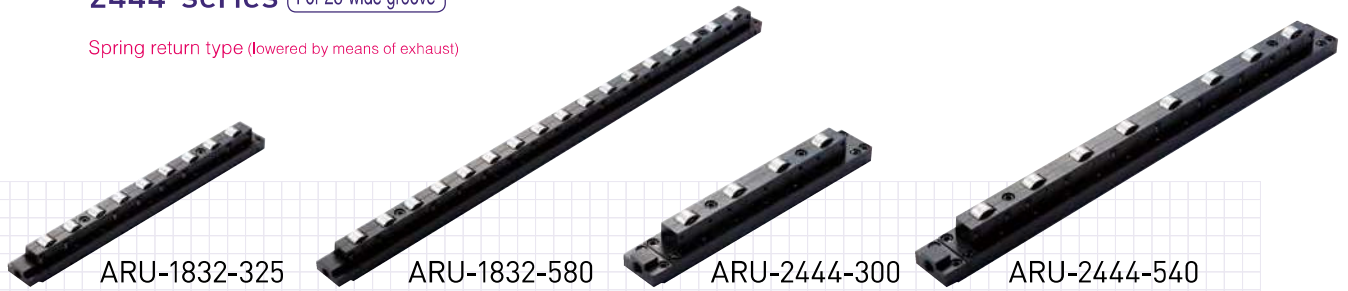
RoHS

CAD

3D

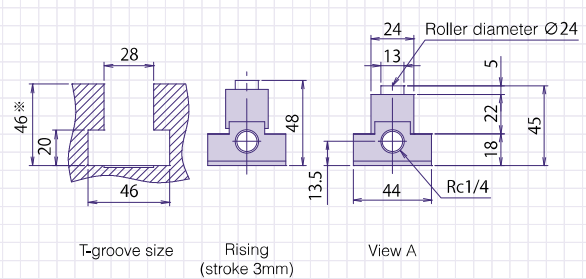
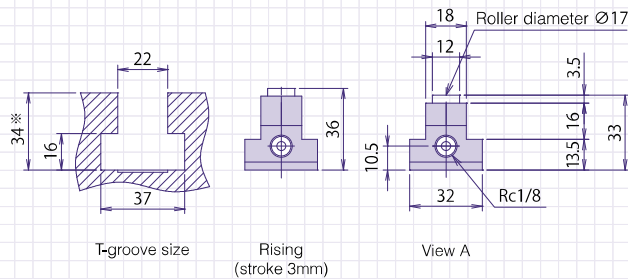
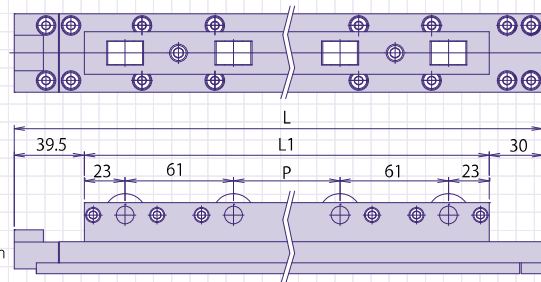
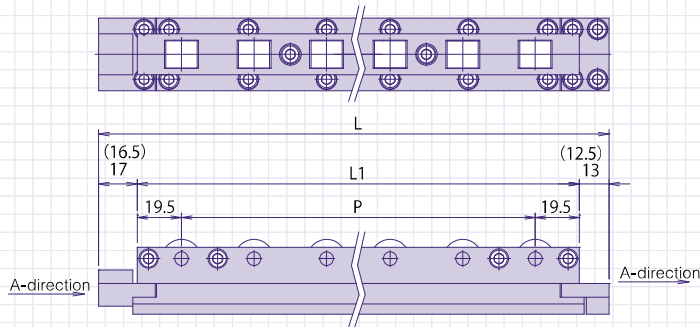
Sizes other than shown below are also available.
Please specify the details in the inquiry sheet of P30.

Spring return type (lowered by means of exhaust)



■ ARU-1832 (For 22-wide groove) ※The size in () is for ARU-1832-580.

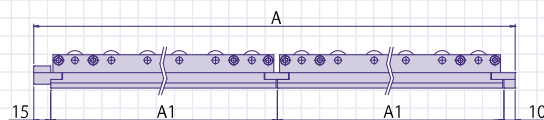
■ ARU-2444 (For 28-wide groove)



※If the T-groove is deeper than 34mm or 46mm, you need to adjust the height by installing a spacer underneath the ARU.
In such case, make sure that the ball extrudes 2mm from the upper surface of the bolster when the ARU rises.
We can provide various types of spacers.

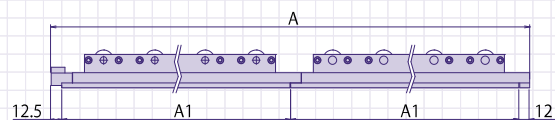
Calculation formula of full length ARU-1832 series : $A = 25 + (\text{Sum of } A1)$

※Only the same series can be connected with each other.
1832 series cannot be connected with 2444 series.



Calculation formula of full length ARU-2444 series : $A = 24.5 + (\text{Sum of } A1)$

※Only the same series can be connected with each other.
1832 series cannot be connected with 2444 series.



(Unit:mm)

Model	Body size (mm)				Weight (kg)	Relation of air pressure and load capacity kN (kgf)			
	L	L1	A1	P		One piece of AFU			
						Operating air pressure MPa (kgf/cm ²)			
						0.30 (3.1)	0.40 (4.1)	0.50 (5.1)	0.60 (6.1)
ARU-1832-325	325	295	300	8 × P32 = 256	1.5	0.98 (100.0)	1.18 (120.3)	1.57 (160.1)	1.96 (199.9)
ARU-1832-580	580	551	555	16 × P32 = 512	2.7	1.96 (199.9)	2.36 (240.7)	3.14 (320.2)	3.92 (399.7)
ARU-2444-300	297.5	228	273	1 × P60 = 60	2.4	1.23 (124.9)	1.47 (149.9)	1.96 (199.9)	2.45 (249.8)
ARU-2444-540	537.5	468	513	5 × P60 = 300	4.5	2.46 (250.1)	2.94 (299.8)	3.92 (399.8)	4.91 (500.1)

Upward type

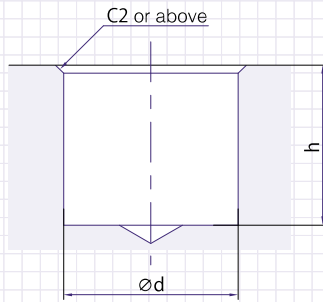
C-5HS



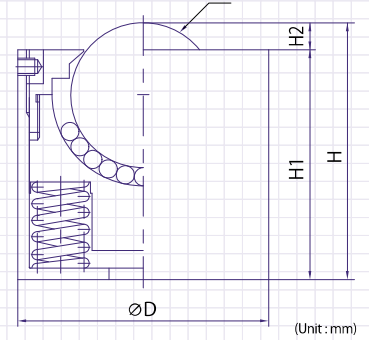
C-8HS



■ Mounting hole diagram



■ Body diagram



The mold weights 1 ton, and ten pieces of C-8HS are used. When putting them at the mold bottom, the clamping force is
[Force making C-8HS sink 2mm : 180kgf] × 10 - [Mold weight 1 ton] = 800kgf

Model	Mounting hole size (mm)		Body size (mm)						Weight (g)	Load test data (average) kN (kgf)			
	d	h	H	H1	H 2	D	B	Sinking amount					
								0.5mm		1.0mm	1.5mm	2.0mm	
C-5HS	Ø 30 +1.0 +0.5	29	31	28	3	Ø 30	5/8" (Ø 15.875)	115	0.23 (24)	0.25 (26)	0.27 (28)	0.29 (30)	
C-6HS	Ø 38 +1.0 +0.5	36	38	35		Ø 38	3/4" (Ø 19.05)	230	0.58 (60)	0.63 (65)	0.68 (70)	0.73 (75)	
C-8HS	Ø 44 +1.0 +0.5	43	45	40.3	4.7	Ø 44	1" (Ø 25.4)	345	1.17 (120)	1.37 (140)	1.56 (160)	1.76 (180)	
C-8HS-200	Ø 60 +1.0 +0.5	58	60	55	5	Ø 60		800	2.35 (240)	2.54 (260)	2.74 (280)	2.94 (300)	

Downward type

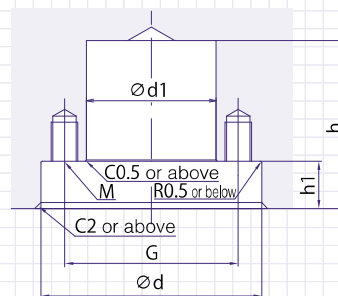
C-6DS



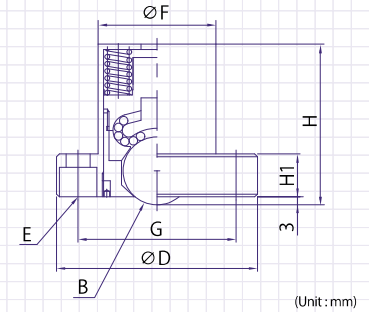
C-8DS



■ Mounting hole diagram



■ Body diagram



Model	Mounting hole size (mm)					Body size (mm)								Weight (g)	Load test data (average) kN (kgf)				
	d	d1	h	h1	M	H	H1	D	F	E (Mounting bolt hole)	G	B	Sinking amount						
													0.5mm		1.0mm	1.5mm	2.0mm		
C-6DS	Ø 61	+1.0 +0.5	Ø 38	+1.0 +0.5	46	14 ± 0.1	M6	47.5	13	Ø 60	Ø 38	2-Ø 6.5 Ø 11 Countersink Depth 8	48	3/4" (Ø 19.05)	470	0.58 (60)	0.63 (65)	0.68 (70)	0.73 (75)
C-8DS	Ø 76	+1.0 +0.5	Ø 44	+1.0 +0.5	58.5	17 ± 0.1	M8	60	16	Ø 75	Ø 44	2-Ø 9 Ø 14 Countersink Depth 11	59	1" (Ø 25.4)	825	1.17 (120)	1.37 (140)	1.56 (160)	1.76 (180)

Upward type

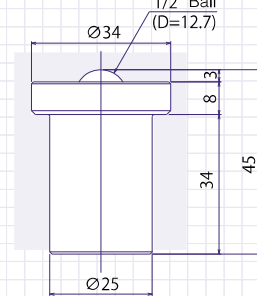
C-4HS-20



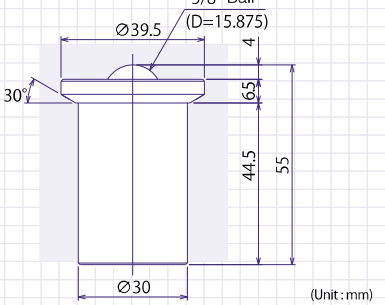
C-5HS-50



■ C-4HS-20



■ C-5HS-50



Model	Weight (g)	Load test data (average) kN (kgf)			
		Sinking amount			
		0.5mm	1.0mm	1.5mm	2.0mm
C-4HS-20	130	0.23 (24)	0.25 (26)	0.27 (28)	0.29 (30)
C-5HS-50	220	0.56 (57)	0.62 (63)	0.68 (69)	0.74 (75)

Labor-saving, time-saving, safe, space-saving and cost-saving

Freebear table owns 5 advantages.

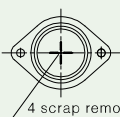
It can be used not only in conveying heavy objects, but also in direction turn and workbench, and plays a significant role in accelerating the operating speed, reducing cost and improving safety.

Freebear Table

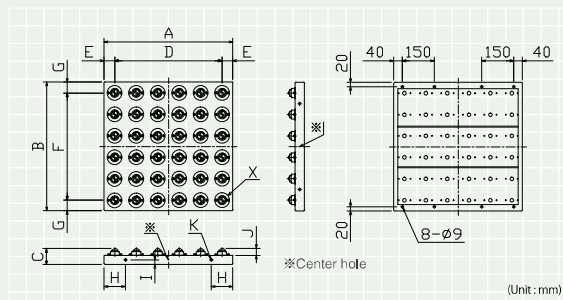


Product with scrap removing function

C-8Y-SL4
Allowable load 30kg



FT-6



Model	Load capacity	A	B	C	D	E	F	G	H	I	J	K	X (Freebear)	Weight
FT-6	500kg*	600	600	74	100 Pitch × 5=500	50	100 Pitch × 5=500	50	100	21.5	31	8-Φ9	C-8Y-SL4 (Qty.:36)	20kg
FT-7	500kg*	700	700		100 Pitch × 6=600		100 Pitch × 6=600						C-8Y-SL4 (Qty.:49)	27kg
FT-8	500kg*	800	800		100 Pitch × 7=700		100 Pitch × 7=700					12-Φ9	C-8Y-SL4 (Qty.:64)	34kg
FT-9	500kg*	900	900		100 Pitch × 8=800		100 Pitch × 8=800						C-8Y-SL4 (Qty.:81)	41kg

*. Please contact us if the workpiece weighs more than 500kg.

You can choose the stainless steel or resin freebear to mount according to the intended use. (Example) S-8Y / P-8Y / J-8Y

※Please contact us in the case of uneven load is applied to.

Freebear Table

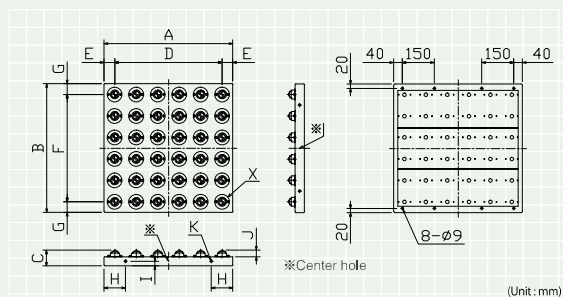


Product with scrap removing function

C-8Y-SL4
Allowable load 30kg



FT-6-75



Model	Load capacity	A	B	C	D	E	F	G	H	I	J	K	X (Freebear)	Weight
FT-6-75	500kg*	600	600	74	75 Pitch × 7=525	37.5	75 Pitch × 7=525	37.5	100	21.5	31	8-Φ9	C-8Y-SL4 (Qty.:64)	23kg
FT-9-75	500kg*	900	900		75 Pitch × 11=825		75 Pitch × 11=825					12-Φ9	C-8Y-SL4 (Qty.:144)	51kg

*. Please contact us if the workpiece weighs more than 500kg.

You can choose the stainless steel or resin freebear to mount according to the intended use. (Example) S-8Y / P-8Y / J-8Y

※Please contact us in the case of uneven load is applied to.

Freebear Table

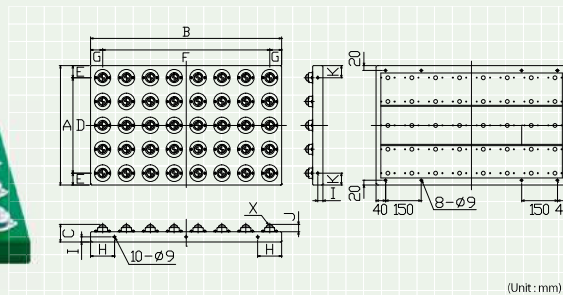


Product with scrap removing function

C-8Y-SL4
Allowable load 30kg



FT-500 × 800



Model	Load capacity	A	B	C	D	E	F	G	H	I	J	K	X (Freebear)	Weight
FT-500×800	500kg*	500	800	74	100 Pitch × 4=400	50	100 Pitch × 7=700	50	100	21.5	31	50	C-8Y-SL4 (Qty.:40)	22kg
FT-600×900	500kg*	600	900		100 Pitch × 5=500		100 Pitch × 8=800					100	C-8Y-SL4 (Qty.:54)	30kg

*. Please contact us if the workpiece weighs more than 500kg.

You can choose the stainless steel or resin freebear to mount according to the intended use. (Example) S-8Y / P-8Y / J-8Y

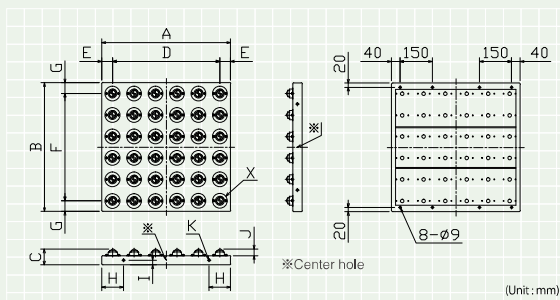
※Please contact us in the case of uneven load is applied to.

※Product specifications are subject to change without prior notice. Please contact us for details.

Freebear Table



FT-5L-6



Model	Load capacity	A	B	C	D	E	F	G	H	I	J	K	X (Freebear)	Weight
FT-5L-6	500kg*	600	600	53.2	50 Pitch × 11=550	25	50 Pitch × 11=550	25	100	21.5	10.2	8-φ9	C-5L (Qty.:144)	20kg
FT-5L-9	500kg*	900	900		50 Pitch × 17=850		50 Pitch × 17=850		150			12-φ9	C-5L (Qty.:324)	42kg

*. Please contact us if the workpiece weighs more than 500kg.

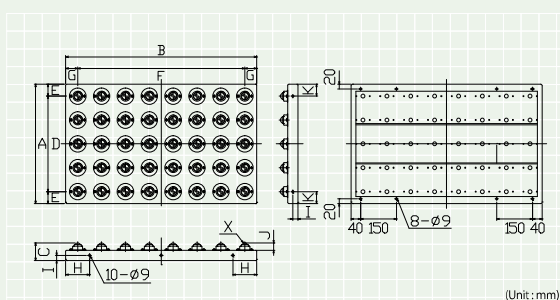
You can choose the stainless steel or resin freebear to mount according to the intended use. (Example) S-5L / P-5L

※Please contact us in the case of uneven load is applied to.

Freebear Table



FT-5L-500 × 800



Model	Load capacity	A	B	C	D	E	F	G	H	I	J	K	X (Freebear)	Weight
FT-5L-500×800	500kg*	500	800	53.2	50 Pitch × 9=450	25	50 Pitch × 15=750	25	100	21.5	10.2	50	C-5L (Qty.: 160)	20kg
FT-5L-600×900	500kg*	600	900		50 Pitch × 11=550		50 Pitch × 17=850		150			100	C-5L (Qty.:216)	25kg

*. Please contact us if the workpiece weighs more than 500kg.

You can choose the stainless steel or resin freebear to mount according to the intended use. (Example) S-5L / P-5L

※Please contact us in the case of uneven load is applied to.

Application examples for Freebear Table, Roller Talbe



Fixed type



Removable type

The fall-preventing guide can be installed as an option.
(Fixed type/Removable type)

※Product specifications are subject to change without prior notice. Please contact us for details.

By operating the handle, you can move up and down the built-in freebears (or rollers) from the table surface. The handle stopper is a standard accessory.

Freebear Table

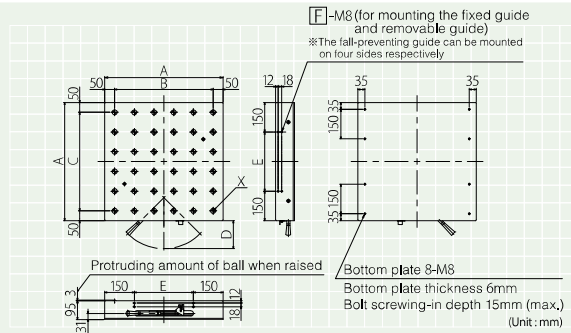


- Handle stopper



HFT-6

Model	Load capacity	A	B	C	D	E	F	X (Freebear)	Weight
HFT-6	500kg	600	100 Pitch × 5=500	100 Pitch × 5=500	145	300	16	C-8Y (Qty.:36)	75kg
HFT-9	500kg	900	100 Pitch × 8=800	100 Pitch × 8=800	210	300 Pitch × 2=600	24	C-8Y (Qty.:81)	150kg



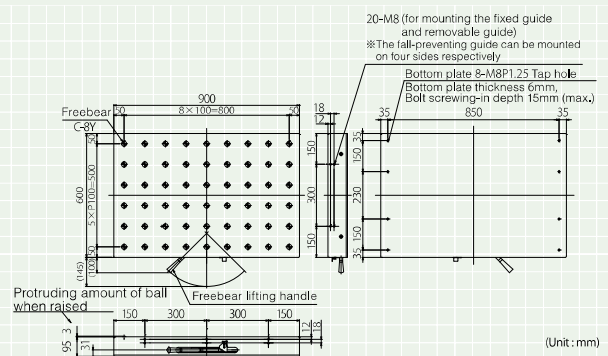
Freebear Table



- Handle stopper



HFT-600 × 900
Load capacity 500kg
Weight 105kg



Roller Table

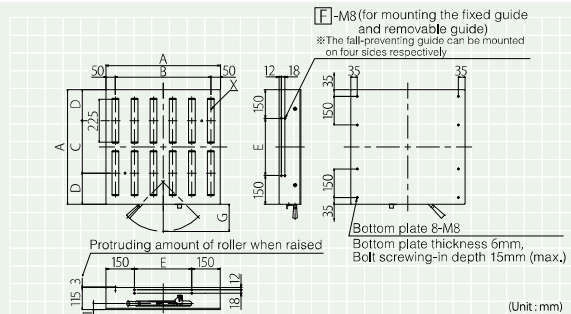


- Handle stopper



HRT-6

Model	Load capacity	A	B	C	D	E	F	G	X (Roller)	Weight
HRT-6	500kg	600	100 Pitch × 5=500	275	162.5	300	16	145	Ø 38 × 6 pcs. × 2 rows	80kg
HRT-9	500kg	900	100 Pitch × 8=800	275 Pitch × 2=550	175	300 Pitch × 2=600	24	210	Ø 38 × 9 pcs. × 3 rows	160kg



Products with the roller direction 90° changed are also available.

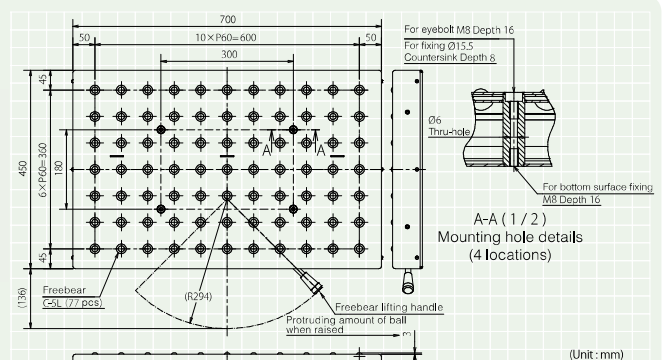
Handle lifting type for light load

A handle lifting type freebear table special for light load (100kg or less) is now available. By operating the handle, the built-in freebears move up and down from the table surface. So you can work safely even when it is attached to a lifting truck.

Freebear Table



LHFT-450 × 700
Load capacity 100kg
Weight 26kg



※Product specifications are subject to change without prior notice. Please contact us for details.

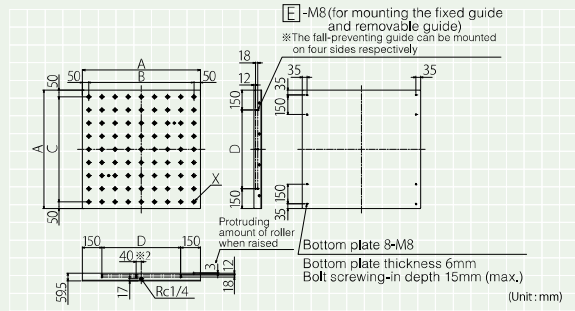
Air lifting type By turning ON or OFF the air valve, you can move up and down the built-in freebears (or rollers) from the table surface.
 ※The air valve is sold separately.

Freebear Table

RoHS CAD 3D



AFT-6



Model	Load capacity	A	B	C	D	E	X (Freebear)	Weight	Recommended air pressure
AFT-6	500kg *	600	100 Pitch × 5=500	100 Pitch × 5=500	300	16	C-8Y (Qty.:36)	64kg	0.50MPa (5.1kgf/cm ²)
AFT-9	500kg *	900	100 Pitch × 8=800	100 Pitch × 8=800	300 Pitch × 2=600 ^{*2}	24	C-8Y (Qty.:81)	130kg	

*. Please contact us if the workpiece weighs more than 500kg.

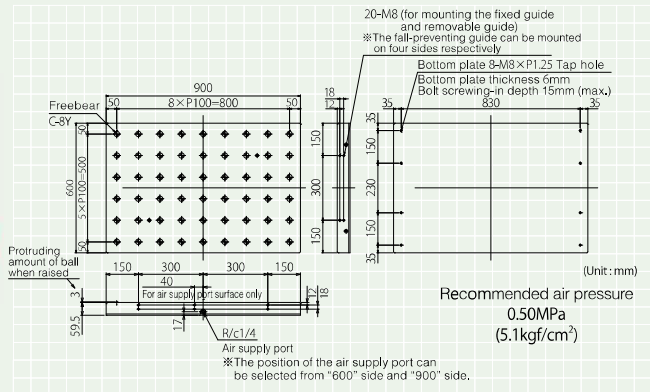
※2 Only the guide mounting holes on the air supply port surface of AFT-9 shift 40mm to the left.

Freebear Table

RoHS CAD 3D



AFT-600 × 900
Load capacity 500kg
Weight 90kg



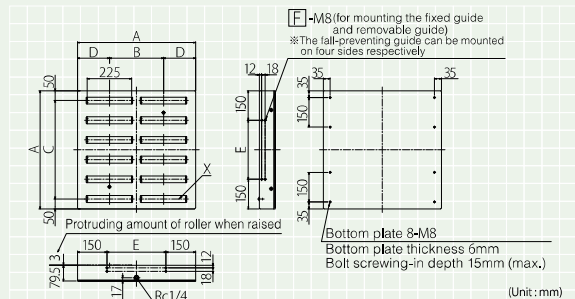
*. Please contact us if the workpiece weighs more than 500kg.

Roller Table

RoHS CAD 3D



ART-6



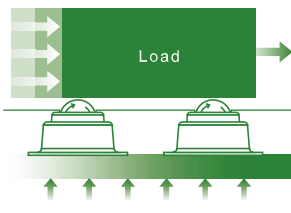
Model	Load capacity	A	B	C	D	E	F	X (Roller)	Weight	Recommended air pressure
ART-6	500kg *	600	275	100 Pitch × 5=500	162.5	300	16	Ø 38 × 6 pcs. × 2 rows	69kg	0.50MPa (5.1kgf/cm ²)
ART-9	500kg *	900	275 Pitch × 2=550	100 Pitch × 8=800	175	300 Pitch × 2=600	24	Ø 38 × 9 pcs. × 3 rows	140kg	

*. Please contact us if the workpiece weighs more than 500kg.

Products with the roller direction 90° changed are also available.

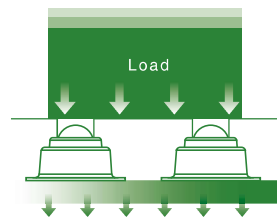
Safely and quickly conveying heavy objects

When conveying



After raising the freebears, the delicate position adjustment and the direction turn of load can be quickly performed with a slight force.

When seating



By lowering the freebears, you can make the load seat on the table surface stably. Heavy objects can be conveyed safely by using the truck.

Fixed type



Removable type

**The fall-preventing guide can be installed as an option.
(Fixed type/Removable type)**

※Product specifications are subject to change without prior notice. Please contact us for details.

Suitable for the labor saving of conveying lines

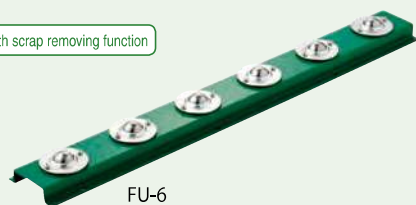
It can substantially save labors in conveying heavy objects.

In addition, we can also provide customized products adapting to your existing equipment to build a conveying system at a low cost.

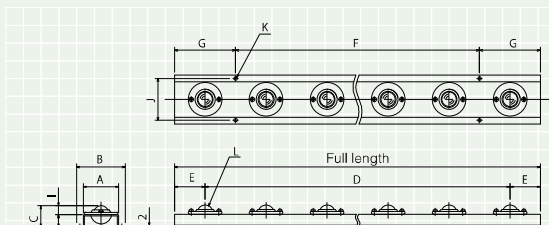
Freebear Unit

RoHS CAD 3D Product with scrap removing function

C-8L-SL4



FU-6



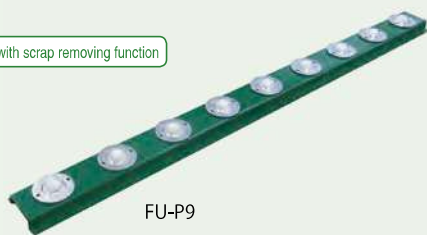
(Unit : mm)

Model	A	B	C	D	E	F	G (Reference value)	H	I	Full length (Reference value)	J	K	L (Freebear)	Weight
FU-1				—		—				100		2-Φ 5.5	C-8L-SL4 (Qty.: 1)	0.3kg
FU-2				100		100				200		4-Φ 5.5	C-8L-SL4 (Qty.: 2)	0.6kg
FU-3				100 Pitch × 2 = 200		100 Pitch × 2 = 200	50			300		6-Φ 5.5	C-8L-SL4 (Qty.: 3)	0.9kg
FU-4				100 Pitch × 3 = 300		100 Pitch × 3 = 300				400		8-Φ 5.5	C-8L-SL4 (Qty.: 4)	1.2kg
FU-5				100 Pitch × 4 = 400		100 Pitch × 4 = 400				500		10-Φ 5.5	C-8L-SL4 (Qty.: 5)	1.5kg
FU-6				100 Pitch × 5 = 500		200 Pitch × 2 = 400	100			600		6-Φ 5.5	C-8L-SL4 (Qty.: 6)	1.8kg
FU-7				100 Pitch × 6 = 600		100 Pitch × 6 = 600				700		14-Φ 5.5	C-8L-SL4 (Qty.: 7)	2.0kg
FU-8				100 Pitch × 7 = 700		100 Pitch × 7 = 700				800		16-Φ 5.5	C-8L-SL4 (Qty.: 8)	2.3kg
FU-9				100 Pitch × 8 = 800		200 Pitch × 4 = 800	50			900		10-Φ 5.5	C-8L-SL4 (Qty.: 9)	2.6kg
FU-10	58	80	34.6	100 Pitch × 9 = 900	50	100 Pitch × 9 = 900		20	14.6	1,000	68.5	20-Φ 5.5	C-8L-SL4 (Qty.: 10)	2.9kg
FU-11				100 Pitch × 10 = 1,000		100 Pitch × 10 = 1,000				1,100		22-Φ 5.5	C-8L-SL4 (Qty.: 11)	3.2kg
FU-12				100 Pitch × 11 = 1,100		200 Pitch × 5 = 1,000	100			1,200		12-Φ 5.5	C-8L-SL4 (Qty.: 12)	3.5kg
FU-13				100 Pitch × 12 = 1,200		100 Pitch × 12 = 1,200				1,300		26-Φ 5.5	C-8L-SL4 (Qty.: 13)	3.8kg
FU-14				100 Pitch × 13 = 1,300		100 Pitch × 13 = 1,300				1,400		28-Φ 5.5	C-8L-SL4 (Qty.: 14)	4.1kg
FU-15				100 Pitch × 14 = 1,400		100 Pitch × 14 = 1,400	50			1,500		30-Φ 5.5	C-8L-SL4 (Qty.: 15)	4.4kg
FU-16				100 Pitch × 15 = 1,500		100 Pitch × 15 = 1,500				1,600		32-Φ 5.5	C-8L-SL4 (Qty.: 16)	4.7kg
FU-17				100 Pitch × 16 = 1,600		100 Pitch × 16 = 1,600				1,700		34-Φ 5.5	C-8L-SL4 (Qty.: 17)	5.0kg
FU-18				100 Pitch × 17 = 1,700		200 Pitch × 8 = 1,600	100			1,800		18-Φ 5.5	C-8L-SL4 (Qty.: 18)	5.2kg

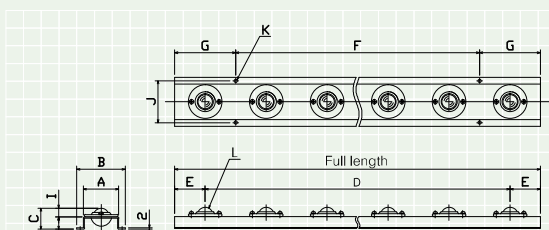
Freebear Unit

RoHS CAD 3D Product with scrap removing function

P-8L-SL4



FU-P9



(Unit : mm)

Model	A	B	C	D	E	F	G (Reference value)	H	I	Full length (Reference value)	J	K	L (Freebear)	Weight
FU-P1				—		—				100		2-Φ 5.5	P-8L-SL4 (Qty.: 1)	0.2kg
FU-P2				100		100				200		4-Φ 5.5	P-8L-SL4 (Qty.: 2)	0.5kg
FU-P3				100 Pitch × 2 = 200		100 Pitch × 2 = 200	50			300		6-Φ 5.5	P-8L-SL4 (Qty.: 3)	0.7kg
FU-P4				100 Pitch × 3 = 300		100 Pitch × 3 = 300				400		8-Φ 5.5	P-8L-SL4 (Qty.: 4)	0.9kg
FU-P5				100 Pitch × 4 = 400		100 Pitch × 4 = 400				500		10-Φ 5.5	P-8L-SL4 (Qty.: 5)	1.2kg
FU-P6				100 Pitch × 5 = 500		200 Pitch × 2 = 400	100			600		6-Φ 5.5	P-8L-SL4 (Qty.: 6)	1.5kg
FU-P7				100 Pitch × 6 = 600		100 Pitch × 6 = 600				700		14-Φ 5.5	P-8L-SL4 (Qty.: 7)	1.6kg
FU-P8				100 Pitch × 7 = 700		100 Pitch × 7 = 700				800		16-Φ 5.5	P-8L-SL4 (Qty.: 8)	1.8kg
FU-P9				100 Pitch × 8 = 800		200 Pitch × 4 = 800	50			900		10-Φ 5.5	P-8L-SL4 (Qty.: 9)	2.1kg
FU-P10	58	80	34.6	100 Pitch × 9 = 900	50	100 Pitch × 9 = 900		20	14.6	1,000	68.5	20-Φ 5.5	P-8L-SL4 (Qty.: 10)	2.3kg
FU-P11				100 Pitch × 10 = 1,000		100 Pitch × 10 = 1,000				1,100		22-Φ 5.5	P-8L-SL4 (Qty.: 11)	2.5kg
FU-P12				100 Pitch × 11 = 1,100		200 Pitch × 5 = 1,000	100			1,200		12-Φ 5.5	P-8L-SL4 (Qty.: 12)	2.9kg
FU-P13				100 Pitch × 12 = 1,200		100 Pitch × 12 = 1,200				1,300		26-Φ 5.5	P-8L-SL4 (Qty.: 13)	3.0kg
FU-P14				100 Pitch × 13 = 1,300		100 Pitch × 13 = 1,300				1,400		28-Φ 5.5	P-8L-SL4 (Qty.: 14)	3.2kg
FU-P15				100 Pitch × 14 = 1,400		100 Pitch × 14 = 1,400	50			1,500		30-Φ 5.5	P-8L-SL4 (Qty.: 15)	3.5kg
FU-P16				100 Pitch × 15 = 1,500		100 Pitch × 15 = 1,500				1,600		32-Φ 5.5	P-8L-SL4 (Qty.: 16)	3.7kg
FU-P17				100 Pitch × 16 = 1,600		100 Pitch × 16 = 1,600				1,700		34-Φ 5.5	P-8L-SL4 (Qty.: 17)	4.0kg
FU-P18				100 Pitch × 17 = 1,700		200 Pitch × 8 = 1,600	100			1,800		18-Φ 5.5	P-8L-SL4 (Qty.: 18)	4.2kg



It is possible to cut to the desired length. Please contact us.

※Product specifications are subject to change without prior notice. Please contact us for details.

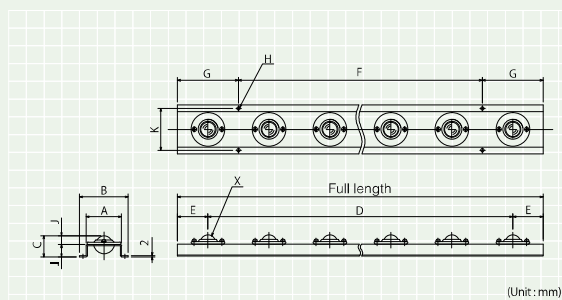
Freebear Unit

RoHS

CAD

3D

Product with scrap removing function



Model	A	B	C	D	E	F	G	H	I	J	Full length	K	X (Freebear)	Weight			
FU-9-75	58	80	34.6	75 Pitch × 11 = 825	37.5	200 Pitch × 4 = 800	50	10- Ø 5.5	20	14.6	900	68.5	C-8L-SL4 (Qty. : 12)	3.0kg			
FU-P9-75													P-8L-SL4 (Qty. : 12)	2.4kg			
FU-18-75				75 Pitch × 23 = 1,725		200 Pitch × 8 = 1,600	100	18- Ø 5.5			1,800		C-8L-SL4 (Qty. : 24)	6.0kg			
FU-P18-75													P-8L-SL4 (Qty. : 24)	4.7kg			

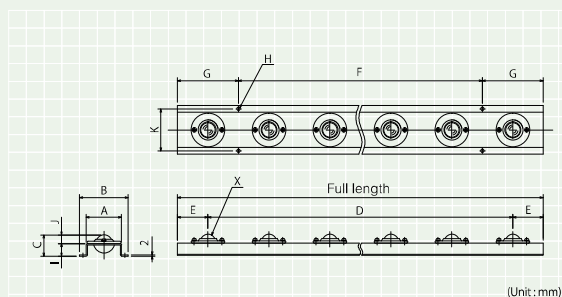
You can choose the stainless steel freebears to mount according to the intended use.

Freebear Unit

RoHS

CAD

3D



Model	A	B	C	D	E	F	G	H	I	J	Full length	K	X (Freebear)	Weight				
FU-5L-9	42	59	21	50 Pitch × 17 = 850	25	200 Pitch × 4 = 800	50	10- Ø 4.5	10.8	10.2	900	51	C-5L (Qty.: 18)	1.8kg				
FU-P5L-9													P-5L (Qty.: 18)	1.6kg				
FU-5L-18				50 Pitch × 35 = 1,750		200 Pitch × 8 = 1,600	100	18- Ø 4.5			1,800		C-5L (Qty.: 36)	3.4kg				
FU-P5L-18													P-5L (Qty.: 36)	2.9kg				

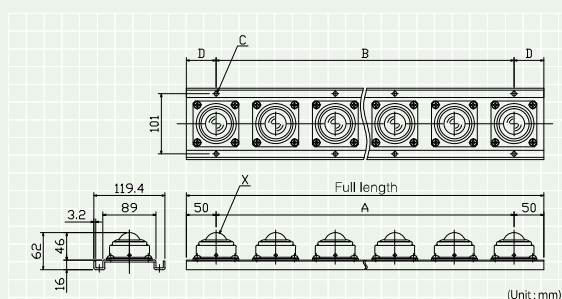
You can choose the stainless steel freebears to mount according to the intended use.

Freebear Unit

RoHS

CAD

3D



Model	A	B	C	D	Full length	X (Freebear)	Weight
FU-12K-9	100 Pitch $\times$ 8 = 800	200 Pitch $\times$ 4 = 800	10- Φ 7	50	900	C-12K (Qty.: 9)	8.2kg
FU-P12K-9						P-12K (Qty.: 9)	6.6kg
FU-12K-18	100 Pitch $\times$ 17 = 1,700	200 Pitch $\times$ 8 = 1,600	18- Φ 7	100	1,800	C-12K (Qty.: 18)	16.4kg
FU-P12K-18						P-12K (Qty.: 18)	13.1kg

You can choose the stainless steel freebears to mount according to the intended use.

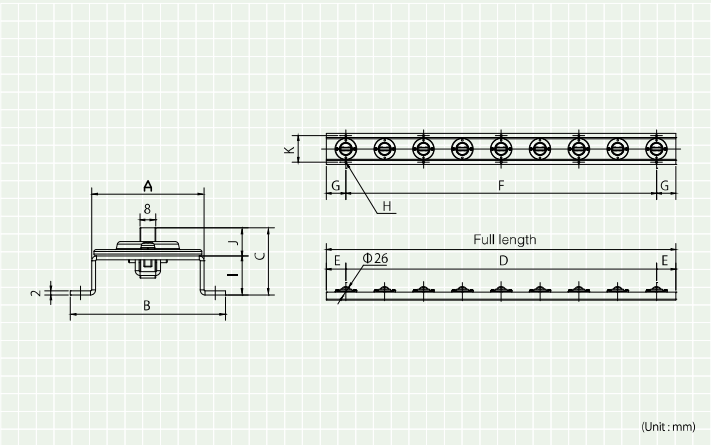
※Product specifications are subject to change without prior notice. Please contact us for details.

Straight type

Rollerbear Unit



RU-C6



(Unit : mm)

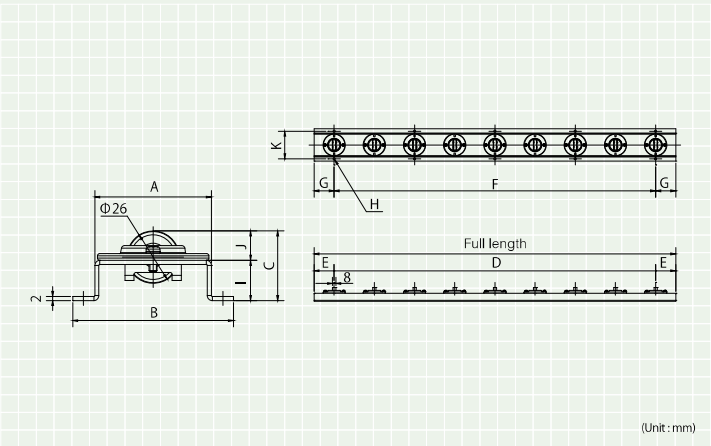
Model	A	B	C	D	E	F	G	H	I	J	Full length	K	Freebear	Weight
RU-C6	58	80	34.6	100 Pitch $\times$ 5 = 500	50	200 Pitch $\times$ 2 = 400	100	Φ 5.5	20	14.6	600	68.5	RC-30 Steel	1.4kg
RU-C9				100 Pitch $\times$ 8 = 800		200 Pitch $\times$ 4 = 800	50				900			2.2kg
RU-C12				100 Pitch $\times$ 11 = 1,100		200 Pitch $\times$ 5 = 1,000	100				1,200			2.9kg
RU-C18				100 Pitch $\times$ 17 = 1,700		200 Pitch $\times$ 8 = 1,600	100				1,800			4.3kg
RU-C9-75				75 Pitch $\times$ 11 = 825	37.5	200 Pitch $\times$ 4 = 800	50				900			2.6kg
RU-C18-75				75 Pitch $\times$ 23 = 1,725		200 Pitch $\times$ 8 = 1,600	100				1,800			4.7kg
RU-P6				100 Pitch $\times$ 5 = 500	50	200 Pitch $\times$ 2 = 400	100				600	68.5	RP-30 Resin	1.4kg
RU-P9				100 Pitch $\times$ 8 = 800		200 Pitch $\times$ 4 = 800	50				900			2.0kg
RU-P12				100 Pitch $\times$ 11 = 1,100		200 Pitch $\times$ 5 = 1,000	100				1,200			2.7kg
RU-P18				100 Pitch $\times$ 17 = 1,700		200 Pitch $\times$ 8 = 1,600	100				1,800			4.1 kg
RU-P9-75				75 Pitch $\times$ 11 = 825	37.5	200 Pitch $\times$ 4 = 800	50				900			2.4kg
RU-P18-75				75 Pitch $\times$ 23 = 1,725		200 Pitch $\times$ 8 = 1,600	100				1,800			4.5kg

Orthogonal type

Rollerbear Unit



RU-C6-Pa



(Unit : mm)

Model	A	B	C	D	E	F	G	H	I	J	Full length	K	Freebear	Weight
RU-C6-Pa	58	80	34.6	100 Pitch $\times$ 5 = 500	50	200 Pitch $\times$ 2 = 400	100	Φ 5.5	20	14.6	600	68.5	RC-30 Steel	1.4kg
RU-C9-Pa				100 Pitch $\times$ 8 = 800		200 Pitch $\times$ 4 = 800	50				900			2.2kg
RU-C12-Pa				100 Pitch $\times$ 11 = 1,100		200 Pitch $\times$ 5 = 1,000	100				1,200			2.9kg
RU-C18-Pa				100 Pitch $\times$ 17 = 1,700		200 Pitch $\times$ 8 = 1,600	100				1,800			4.3kg
RU-C9-75-Pa				75 Pitch $\times$ 11 = 825	37.5	200 Pitch $\times$ 4 = 800	50				900			2.6kg
RU-C18-75-Pa				75 Pitch $\times$ 23 = 1,725		200 Pitch $\times$ 8 = 1,600	100				1,800			4.7kg
RU-P6-Pa				100 Pitch $\times$ 5 = 500	50	200 Pitch $\times$ 2 = 400	100				600	68.5	RP-30 Resin	1.4kg
RU-P9-Pa				100 Pitch $\times$ 8 = 800		200 Pitch $\times$ 4 = 800	50				900			2.0kg
RU-P12-Pa				100 Pitch $\times$ 11 = 1,100		200 Pitch $\times$ 5 = 1,000	100				1,200			2.7kg
RU-P18-Pa				100 Pitch $\times$ 17 = 1,700		200 Pitch $\times$ 8 = 1,600	100				1,800			4.1 kg
RU-P9-75-Pa				75 Pitch $\times$ 11 = 825	37.5	200 Pitch $\times$ 4 = 800	50				900			2.4kg
RU-P18-75-Pa				75 Pitch $\times$ 23 = 1,725		200 Pitch $\times$ 8 = 1,600	100				1,800			4.5kg

※Product specifications are subject to change without prior notice. Please contact us for details.

Mold change truck

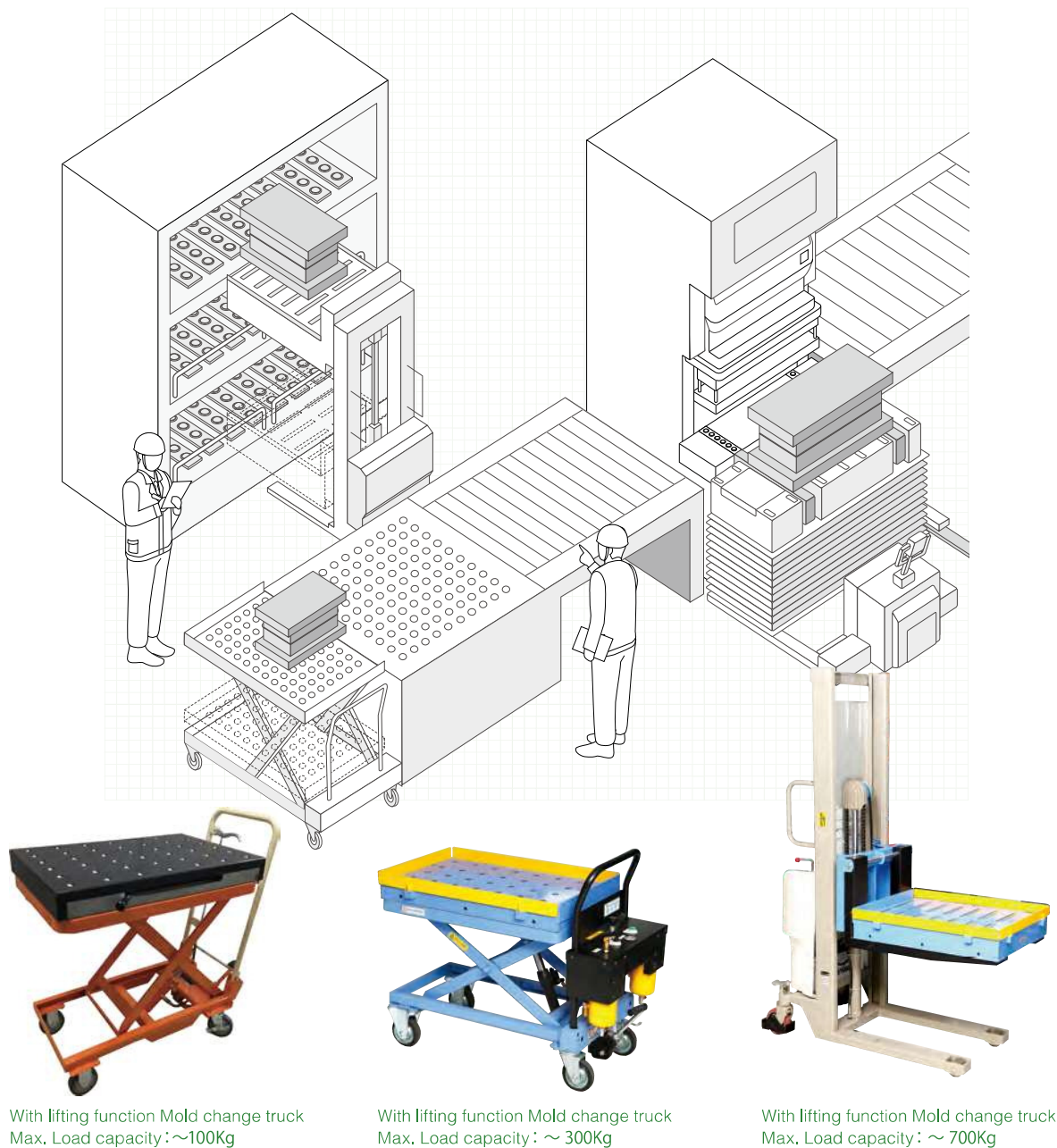
Making mold change faster and more secure.

It can also be used as an exclusive truck to reduce the waiting time of forklifts or cranes.

Equipped with the fall-preventing guides as a standard, the safety is enhanced.

※For safety devices such as the interlock, please contact us.

Easy operation without the license for operating forklifts or cranes



With lifting function Mold change truck
Max. Load capacity : ~100Kg

With lifting function Mold change truck
Max. Load capacity : ~ 300Kg

With lifting function Mold change truck
Max. Load capacity : ~ 700Kg

Application Examples



Conveyance

Heavy objects can be conveyed with a slight force in a short period of time, without the need for huge and dangerous equipment such as forklifts or cranes. In addition, it can make a heavy object to seat, realizing the safe conveyance.

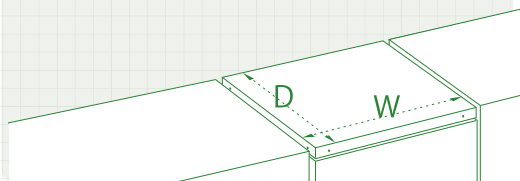
※The products published above are application examples of customized products. Please contact us for details.

How to choose the perfect products for applications and sites.

You can customize various combinations of the materials and sizes of freebears according to the intended use and installation site.

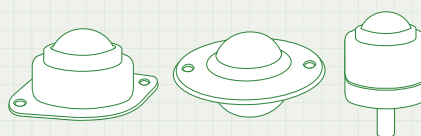
1. Select the table size (W, D)

Determine the width and depth of the table body



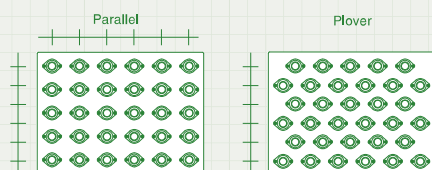
2. Select the freebears according to the conveyance object

Select the freebears to be mounted



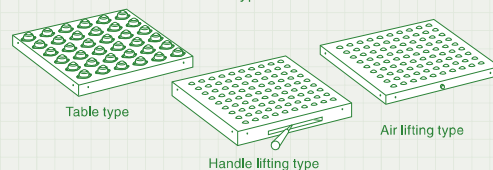
3. Select the mounting method and ball pitch of the freebears

Determine the arrangement and pitch of the freebears



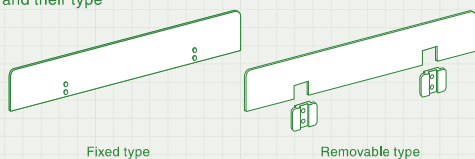
4. Select a table according to the intended use

Select the type of the table



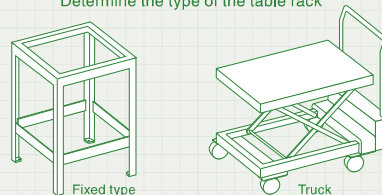
5. Whether to use the fall-preventing guides or not Select a fixed type or removable type

Determine the presence or absence of the fall-preventing guides and their type



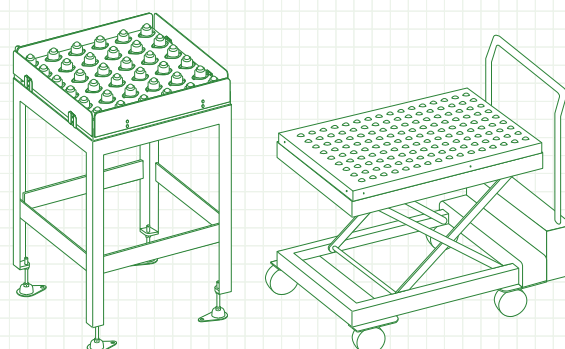
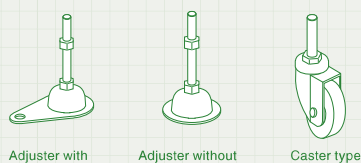
6. Whether to use a table fixing rack or not Select the rack

Determine the type of the table rack



7. Select adjusters and casters

Determine the type of the adjusters

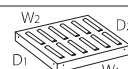
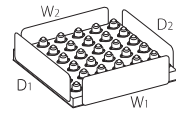


Inquiry Sheet

E-MAIL
overseas-div@freebear.co.jp

Please copy this sheet and fill out the necessary items, and then send it to us by E-MAIL.

Filling date (month) (day) (year)

Your company name		Plant name						
Address 〒								
Filled by		Department						
TEL.	FAX.	e-mail						
Please fill in the contents under consideration.								
Conveyance object	Overall and conveying surface shape							
	Size	Max.: Width () mm x Depth () mm x Height () mm Weight ()kg						
		Min.: Width () mm x Depth () mm x Height () mm Weight ()kg						
	Rust-proof	☐ Yes ☐ No	Dust-proof	☐ Yes ☐ No				
	Temperature		☐ Room temperature ☐ Operating temperature (°C ~ °C)					
	Environment	☐ Normal (indoor) ☐ Outdoor ☐ Clean room ☐ Other ()						
Conveying surface material			Uneven load ☐ Yes ☐ No					
Budget			Implementation time					
Selection of freebear table	1	Fill in the table size. W()mm x D()mm						
	2	Select whether to have the freebear to be mounted chosen by our company or by yourself. For the latter, please fill in the model. ☐ By our company ☐ By yourself() ※Example:(C-8Y)						
	3	Select the mounting method of the freebears, and fill in the pitch. ☐ Parallel() Pitch ☐ Plover() Pitch ☐ By our company						
	4	Select the type of the table. If you select types other than FT, select the location of the handle (air supply port). ☐ FT ☐ HFT ☐ AFT ☐ HRT ☐ ART						
	 Select the location of the handle (air inlet) from the left figure. ☐ W1 ☐ D1 ☐ W2 ☐ D2							
	5	Select whether to use the fall-preventing guides or not. Please circle the Fixed, Removable, or No for each mounting location. ☐ Yes ☐ No <table border="0"> <tr> <td>☐ W1 (Fixed, Removable, No)</td> <td>☐ D1 (Fixed, Removable, No)</td> </tr> <tr> <td>☐ W2 (Fixed, Removable, No)</td> <td>☐ D2 (Fixed, Removable, No)</td> </tr> </table> 			☐ W1 (Fixed, Removable, No)	☐ D1 (Fixed, Removable, No)	☐ W2 (Fixed, Removable, No)	☐ D2 (Fixed, Removable, No)
	☐ W1 (Fixed, Removable, No)	☐ D1 (Fixed, Removable, No)						
	☐ W2 (Fixed, Removable, No)	☐ D2 (Fixed, Removable, No)						
6	Select whether to use the rack or not. If you select "Yes", select the type of the rack and fill in the size. ☐ Yes ☐ No <table border="0"> <tr> <td>☐ Fixed rack</td> <td>Height from conveying surface to the floor H()mm</td> </tr> <tr> <td>☐ Truck</td> <td> ☐ Movable type Stroke (mm~ mm) ☐ Fixed type Height from conveying surface to the floor H()mm </td> </tr> </table>			☐ Fixed rack	Height from conveying surface to the floor H()mm	☐ Truck	☐ Movable type Stroke (mm~ mm) ☐ Fixed type Height from conveying surface to the floor H()mm	
☐ Fixed rack	Height from conveying surface to the floor H()mm							
☐ Truck	☐ Movable type Stroke (mm~ mm) ☐ Fixed type Height from conveying surface to the floor H()mm							
7	Select the type of the adjusters or casters. Please circle the material for the casters in (). ☐ Adjuster — ☐ With fixing part ☐ Without fixing part ☐ Caster (Rubber, Polyurethane, Nylon) — ☐ With brake ☐ Without brake							
8	Select whether to specify the coating color or not. If you select "Yes", please fill in the specified color. ☐ Yes — Munsell color() ☐ No — Standard color of the freebear (Munsell color 5G4/8 Green)							

Carry “dream”

FREEBEAR®

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RoHS

FREEBEAR® is a RoHS-compliant product.

RoHS is the shortened term for the "Restriction of the use of certain Hazardous Substance in Electrical and Electrical Equipment". It defines the hazardous substances contained in electrical and electrical equipment and restricts the use of certain hazardous substances. The objective of the directive is to minimize the hazards harmful to the environment and human health during the life cycle of products from production to disposal.

We have achieved the “ISO14001 Environment Management System” and the “ISO9001 Quality Management System” certification in 2006.



HP

ISO9001:2015 / Registration No.Q2486 (Osaka, Tokyo, Nagoya)
ISO14001:2015 / Registration No.E0974 (Osaka, Tokyo, Nagoya)

For CAD data download, more product details and new product release, please visit: <https://www.freebear.co.jp/>