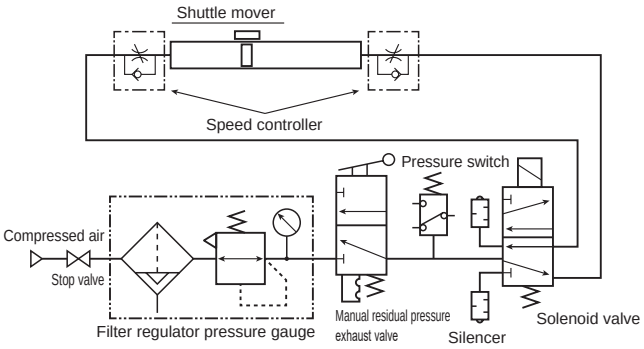
Technical data

1 Basic circuit

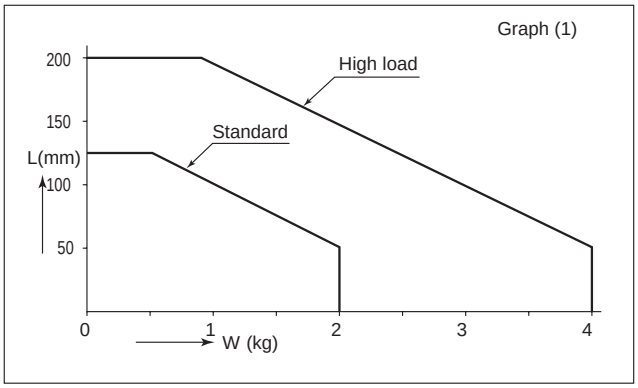


2 Selection guide

The max. allowable load weight will vary depending on the amount of overhang of the center of gravity of the load and the average working speed.
Accordingly, make a selection that satisfies both the following step 1 and step 2.

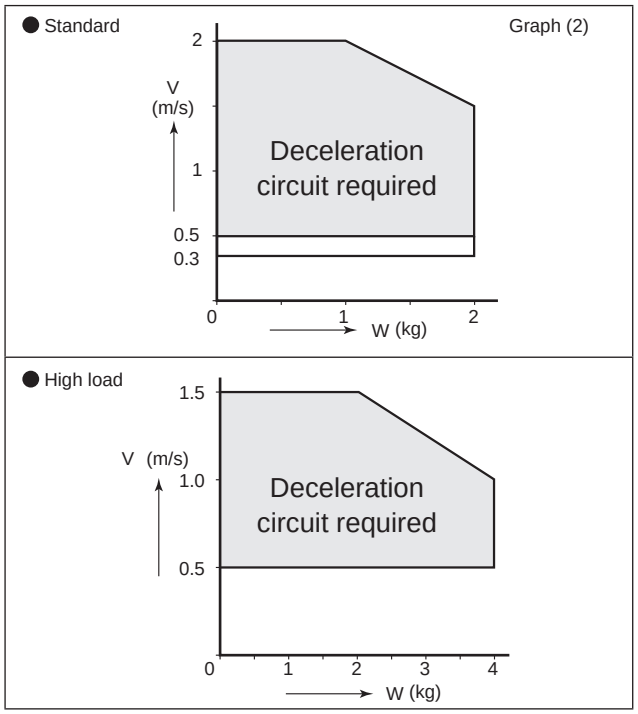
STEP 1 Load weight and amount of overhang

* The allowable load weight will vary depending on the amount of overhang.
  Use this product within the range of the following graph (1).
* Refer to the examples of selection when calculating amount of overhang L.

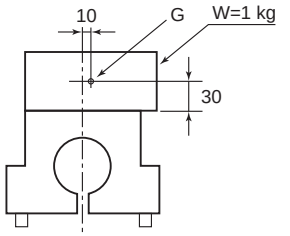


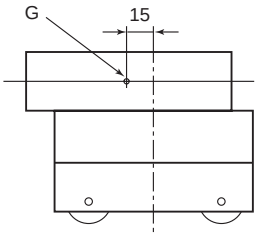
STEP 2 Load weight and average speed

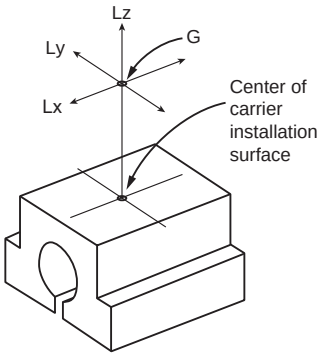
* The average speed available during use will vary depending on the load weight.
  Use this product within the range of the following graph (2).
* When using the product with an average speed of 0.5 m/s or above, it is necessary to provide a deceleration circuit such as a shock absorbing valve (SKH series).
* Refer to the corresponding pages of the catalog for pneumatic valves for selection and use of a shock absorbing valve (SKH series).



● Example of selection







W : Load weight
G : Center of gravity of load
Lx : Displacement of G in X direction
Ly : Displacement of G in Y direction
Lz : Displacement of G in Z direction
L : Amount of overhang
L=Lx+Ly+Lz

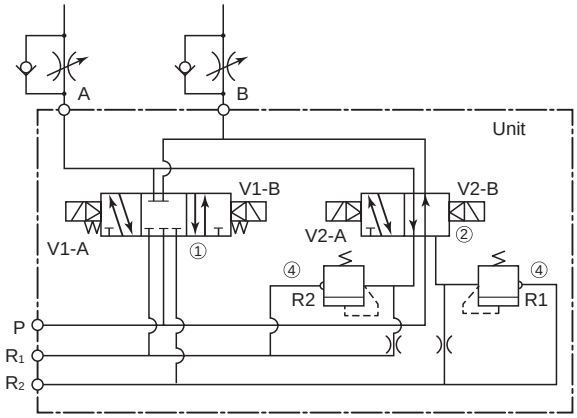
W=1 kg
V=1.5 m/s
Lx=15 mm
Ly=10 mm
Lz=30 mm
L=15+10+30=55 mm

When using the product with a load weight of 1 kg and a speed of 1.5 m/s, according to graph (2) as long as W = 1 kg, the speed is up to 2 m/s which is within the range. However, the use of a deceleration circuit will be necessary.
In relation to the displacement of the position of center of gravity of the load, since up to 100 mm is allowed according to graph (1) as long as W = 1 kg, a displacement of the center of gravity by L = 55 mm is within the allowable range.

Technical data

● Example of deceleration circuit diagram

* An example when a shock absorbing valve is used.



	Part name	Model No.	Qty.	Remarks
1	Solenoid valve	4KB339	1	For high speed
2	Solenoid valve	4KB329	1	For low speed
3	Manifold block		1	
4	Spacer relief valve	SKH-3SR	1	

● Other precautions

(1) A shuttle valve will be necessary when operating a single acting chuck, etc., by using an air supply unit (PP).

(2) Make sure the installation base has a vertical leveling function (leveling bolts, etc.), and fix with anchor bolts after final adjustment.

(3) Use an interval of 2 m as a guide for the pitch between legs upon installation.

(4) When transferring workpieces between the shuttle mover and other facilities of your company (such as a conveyor), be sure to include a transfer position adjustment mechanism in your equipment.

(5) Consult with a sales representative for other detailed designs.

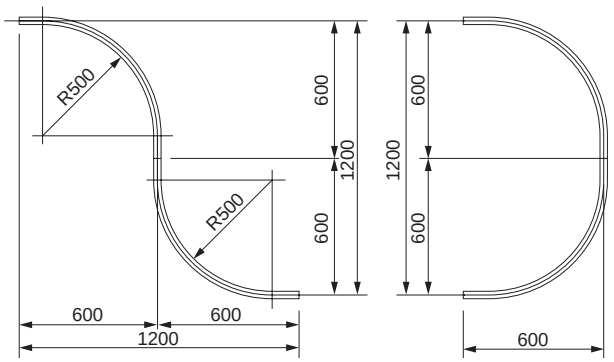
3 Stroke of each unit

Unit name	Model No.	Stroke (mm)
Rail end	RE	75±10
Straight unit	[Example] ST-100	100
	ST-200	200
	ST-1000	1000
	ST-1015	1015
	ST-2000	2000
Curve unit 90°	SC90 VC90-IN VC90-OUT	985
Curve unit 45°	SC45 VC45-IN VC45-OUT	590

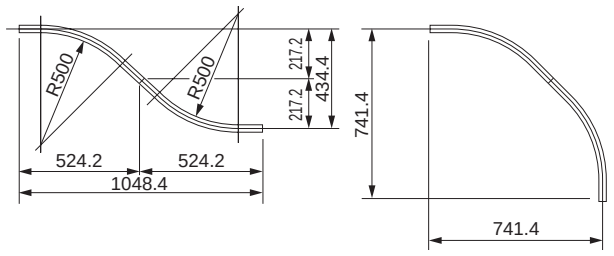
* The strokes are the same with the standard and the high load.

4 Min. dimensions of combination with a curve unit

1) 90° and 90°



2) 45° and 45°



3) 90° and 45°