

1. [TAIYO TOP](#)
2. [Product Information](#)
3. [Hydraulic & Pneumatic](#)
4. [Shock Absorber](#)
5. [Dyna-Softer](#)
6. [SA-11 Series](#)

- [Catalog PDF](#)
- [Contact Us](#)

Shock Absorber (Fixed Type (Air Return Type))



Fixed Type Multi-orifice **SA-11 Series**

This series of products are made to order for optimum orifice design based on the customer's specifications.

- Since the shock absorbers use a knife edge orifice, they are designed so that they are less affected by viscosity change due to temperature.
- Multi-orifice type shock absorbers which can softly absorb energy.
- A shock absorber having optimum absorbing characteristics for working conditions within the specified energy absorption capacity can be manufactured.
- Small, light and cost-efficient shock absorbers designed to meet the actual conditions.
- The use of the air return mechanism can delay the return of the rod.
- When an external stopper is installed, an ineffective stroke can be provided at the rear.
(Contact us.)

Specification

Model number		S* $\frac{F}{H}$ -11-10 U	S* $\frac{F}{H}$ -11-20 U	S* $\frac{F}{H}$ -11-30 U	S* $\frac{F}{H}$ -11-40 U
Max. absorbed energy	J	333	F/E/H style:677 U style:618	F/E/H style:1010 U style:569	F/E/H style:902 U style:490
Stroke	mm	25.4	50.8	76.2	101.6
(Note 1) Max. energy capacity per minute	J/min	2030	2450	2980	3190
Collision speed range	m/s	0.05 to 7.6(Spring return) · 0.05 to 2.3(Air return)			
(Note 2) Rod returning force	N	124	163	157	174
Working temperature range	°C	-5 to +50 (No freezing)			
Mounting style		F style (Front flange) E style (Rear flange) H style (Foot) U style (Cap clevis)			
Weight	kg	1.87	2.39	2.90	3.42
Accessories		Auxiliary oil reservoir, external accumulator			

(Note 1) ● The max. energy capacity per minute shown in the table is the value at an ambient temperature of 26.7°C. The max. energy capacity per minute E_2 (J/min) at an ambient temperature T (°C) is indicated by the following formula.

$$E_2 = \frac{(82.2 - T)}{55.5} \times \left(\frac{\text{max. energy capacity}}{\text{per minute shown in table}} \right)$$

● It is recommended to select a shock absorber with an allowance so that the energy absorption is about 70% (reference) or less of the maximum energy absorption. When selecting a shock absorber without an allowance, consult us.

(Note 2) ● Maximum values when rod is retracted full stroke

● The shock absorbers can absorb actual corresponding weight of up to 50% of design corresponding weight.

$$0.5 \leq \frac{\text{actual corresponding weight}}{\text{design corresponding weight}} \leq 1$$

How to Order

When placing an order, specify the model number shown below.

S A F - 1 1 - 20

Return type

S Spring return

A Air return

Mounting style

F Front flange

E Rear flange

H Foot

U Cap clevis

Stroke (nominal)

10 25.4mm

20 50.8mm

30 76.2mm

40 101.6mm