Shock Absorber （Fixed Type (Spring Return Type))

Fixed Type Multi-orifice **SS-20 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.
- If an oil cooler (heat exchanger) is used, the energy absorption capacity can be increased.
- 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		F S✻E H U-20-10	F S✻E H U-20-20	F S✻E H U-20-30	F S✻E H U-20-40
Max. absorbed energy	J	1060	2120	3190	4250
Stroke	mm	25.4	50.8	76.2	101.6
(Note 1) Max. energy capacity per minute	J/min	4800{11900}	5030{14300}	5290{16800}	5330{19000}
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	309			
Working temperature range	℃	−5 to +50 (No freezing)			
Mounting style		F style (Front flange) E style (Rear flange) H style (Foot) U style (Cap clevis)			
Weight	kg	7.29	7.88	8.47	9.06
Accessories		Auxiliary oil reservoir, external accumulator, heat exchanger			

Model number		F S✻E H U-20-50	F S✻E H U-20-60	F S✻E H U-20-70	F S✻E H U-20-80
Max. absorbed energy	J	5320	6370	F/E/H style:7440 U style:7110	F/E/H style:8500 U style:6860
Stroke	mm	127	152.4	177.8	203.2
(Note 1) Max. energy capacity per minute	J/min	6350{24300}	6590{26600}	6780{29000}	7070{31400}
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	309			
Working temperature range	℃	−5 to +50 (No freezing)			
Mounting style		F style (Front flange) E style (Rear flange) H style (Foot) U style (Cap clevis)			
Weight	kg	11.46	12.05	12.64	13.27
Accessories		Auxiliary oil reservoir, external accumulator, heat exchanger			

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

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

- The values in brackets { } are the maximum energy capacities per minute of shock absorbers provided with heat exchanger.
- 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.

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

How to Order

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