

Instruction Manual

Hydraulic Stacker Crane Buffer(KCSC)

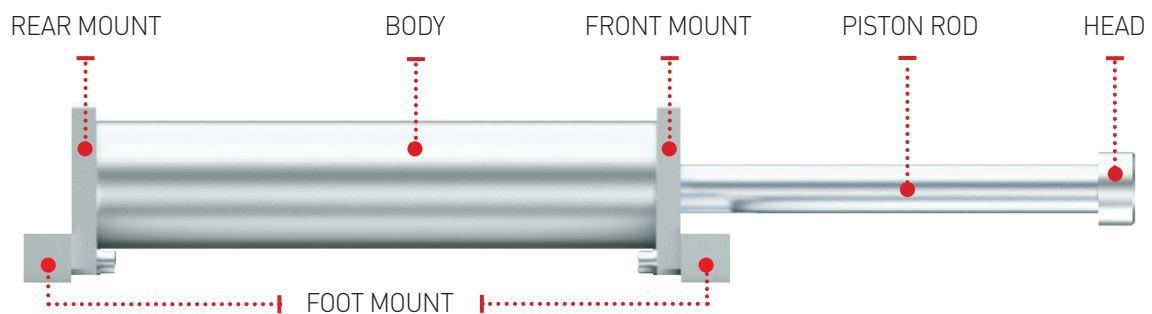
※ Details could be changed without prior notice subject to the performance upgrade.

1. Structure & operating theory of KCSC Series Stacker Crane Buffer

KCSC Series is Gas Returned type and its gas amount is designed to be relatively larger than oil amount, so it has low peak and low recoil force. Therefore, it operates with minimum resistance during normal operation and it can safely decelerates the object in case of emergency.

KCSC Series is mainly used for stacker crane of automated logistics system. It produces standard products with Stroke up to 1500mm and energy absorption capacity up to 800kJ, and other special specifications are available on order basis.

We also manufacture and supply industrial safety standards conforming to OSHA, AISE, CMMA, DIN, FEM and other standard specifications.



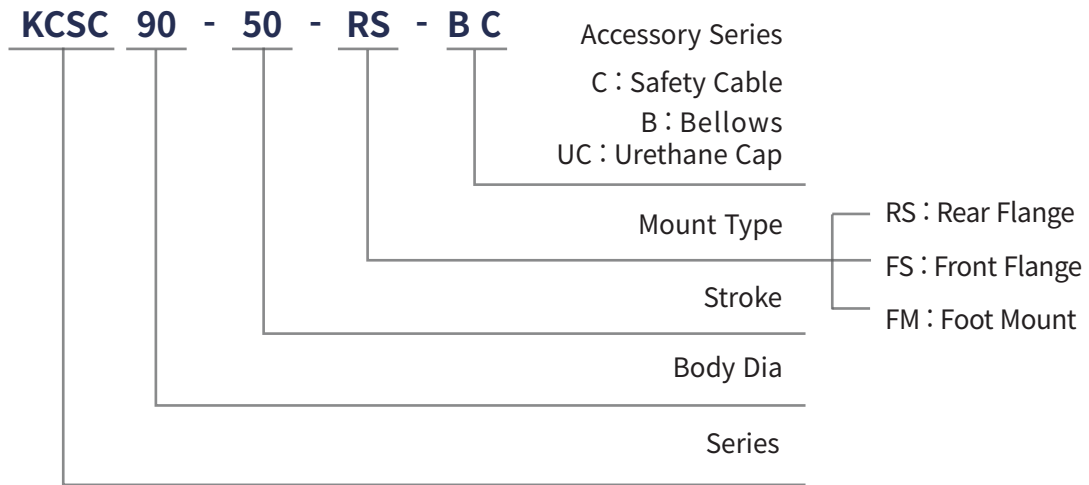
2. KCSC Features

- ① Max. Speed : 3.8m/s
- ② Temperature : Standard (-10~80°C), Special (-30~100°C)
- ③ Return media : Nitrogen Gas
- ④ Piston Rod : Hard Chrome(25µm up)
- ⑤ Body surface treatment : White zinc plated

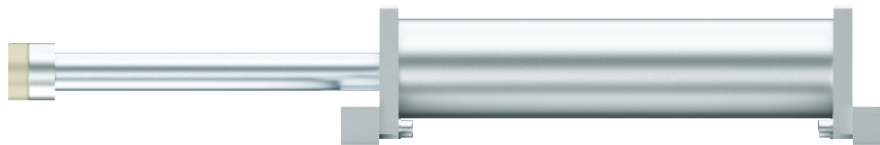
3. KCSC Options

- ① Protective Bellows
- ② Safety Cable
- ③ Urethane Cap
- ④ Mounting Plates
- ⑤ Foot Mounts
- ⑤ Sensor

4. KCSC Series Ordering Information



5. Accessory



Urethane Cap



Sensor Type

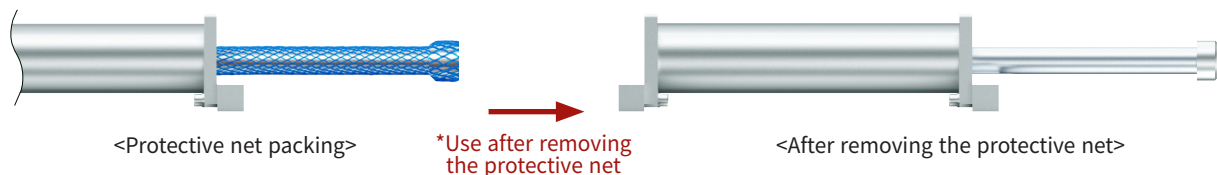
6. Special Order

- Temperature : -30~100°C
- Special Coatings
- Body Chrome Plating
- Stainless Steel

6. Operation Manual

KOBA's Stacker Crane Buffer is designed for long life. Please consider using it with considering following points.

- 1) Check if the capacity is properly selected.
- 2) Check if the operating temperature is appropriate (standard temperature $-10^{\circ}\text{C}\sim 80^{\circ}\text{C}$), and contact the head office or agency if other temperature conditions are required.
- 3) Check whether the mounting bolts, lock nuts, and set screws are properly tightened before use.
- 4) Do not weld or paint the body.
- 5) Do not scratch or paint the Piston Rod.
(It shortens the life of Stacker Crane Buffer due to leakage.)
- 6) Be sure to remove the foamed paper for Piston Rod protection before use.



7. Check points on installation

- 1) The installation angle (θ) of the collision object and Stacker Crane Buffer is normally within 3.5° for 0~100mm, within 3° for 101~200mm, within 2.5° for 201~300mm, and within 1° for 301mm or more.



KCSC Stacker Crane Buffer

8. Check

For stable and normal use of Stacker Crane Buffer, the following points should be checked.

- 1) Check if any foreign materials may on the piston rod, foreign material should be remove cleanly.
- 2) Check for oil leakage in the seal area.
- 3) Check the dimensions of the Stoke section.
If general dimensions are not secured according to the stoke, refill gas through the gas injection valve and check for other problems.



This product is manufactured through strict quality control.
The product warranty period is 12 months from the date of purchase.

1. Free Service

In case the trouble comes within the warranty period, please contact our distributor or head quarter for free maintenance service or replacement.

2. Service on cost

Following cases are out of free service and it requires to pay for the service cost.

- 1) Mishandling on operation
- 2) Passing warranty period
- 3) When abnormal operation occurs or the product cannot be used again by applying it on abnormal conditions
- 4) Failure or damage due to user negligence (arbitrarily disassembled, assembled, or modified)
- 5) Failure and damage due to natural disasters
- 6) In case of damage caused by mistake during transportation
- 7) Failure or damage due to external shock, damage, or leakage



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