



Safety Precautions

Be sure to read this section before use.

Refer to Intro Page 73 for general information of the cylinder, and to Intro Page 80 for general information of the cylinder switch.

LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MedHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Product-specific cautions: High speed cylinder HCA Series

Design/selection

CAUTION

- Avoid using the product so as to apply lateral load to the piston rod of the cylinder. The required speed may not be attained, bearings may wear abnormally, and performance may drop.
- Cushion
The air cushion absorbs kinetic energy that the piston generates by using air compressibility and prevents the piston and cover from colliding at the stroke end. Therefore, note that it is not a function for reducing the piston speed near the stroke end.

- Consider the system selection guide of the cylinder only as a guideline, as it may vary depending on the operating conditions (working pressure, travel method and direction of the load and piping length).
- Operating the cylinder at high speed increases the instantaneous flow rate of the air, allowing drainage to accumulate more easily. Provide an air tank to prevent drain from entering the cylinder and to prevent pressure loss when filtering oil mist.

Mounting, installation and adjustment

CAUTION

- The cylinder has been designed for high-speed use, and the JISB1554 nut (ball bearing lock nut, washer and clasp) is used to prevent loosening when mounting the body. Use the following hook spanner wrench when fixing mounting brackets on the body, and when loosening the lock nut to disassemble the body.

(1) When fixing mounting brackets on the body

Model No.	HCA-20	HCA-25	HCA-32	HCA-40
Item				
Nut used	AN05	AN05	AN05	AN07
Hook spanner wrench size	Nominal 34-38	Nominal 34-38	Nominal 34-38	Nominal 45-50
Model No.	HCA-50	HCA-63	HCA-80	HCA-100
Item				
Nut used	AN08	AN08	AN12	AN12
Hook spanner wrench size	Nominal 52-55	Nominal 58-62	Nominal 80-90	Nominal 80-90

(2) Tightening the body lock nut

Model No.	HCA-20	HCA-25	HCA-32	HCA-40
Item				
Hook spanner wrench size			Nominal 34-48	Nominal 45-50
Wrench	Nominal 30	Nominal 35		
Model No.	HCA-50	HCA-63	HCA-80	HCA-100
Item				
Hook spanner wrench size	Nominal 52-55	Nominal 68-75	Nominal 80-90	Nominal 110-115
Wrench				

- Note that the working speed of 3000 mm/s is the max. speed, not the average speed.
- The cylinder body restriction is designed for a speed of 3000 mm/s and over, and should not be constricted by piping, valves, or speed controllers.
- When adjusting speed with the speed controller, gradually open the needle from the closed state and increase speed. The piston rod may suddenly pop out and create a hazard if speed is adjusted while the needle is open.
- If operation is started while the exhaust side is at atmospheric pressure, the rod could pop out and cause a dangerous situation. Pressurize the exhaust side before starting.
- Mount the speed controller near the cylinder piping port. Otherwise, speed cannot be controlled.
- When the unit will be used where the specifications of the cushion (allowable absorbed energy) will be exceeded, provide a separate external shock absorber.