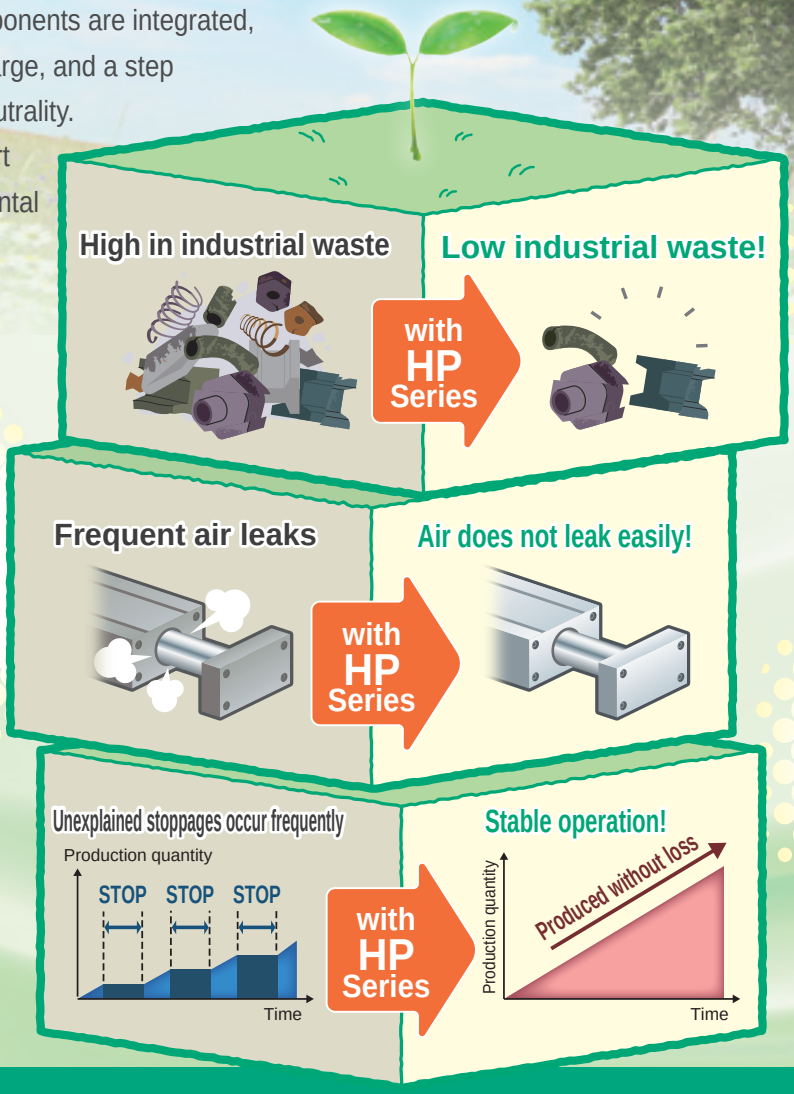
CKD

# Why not start with Small Environmental Measures?

One component may have a small effect.
However, when components are integrated,
the effect becomes large, and a step
forward to carbon neutrality.
Would you like to start
with small environmental
measures using the
**HP Series?**



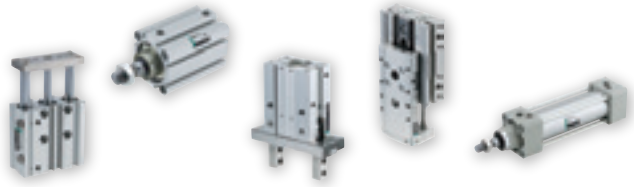

**Reduces industrial waste volume**

**Reduces air consumption**

**Reduces energy wasted in production downtime**

## Contribute to carbon neutrality with the HP Series!

HP
HIGH PRODUCTIVITY
High-Durability Component "HP Series"



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CC-1606A

HIGH PRODUCTIVITY

Problem #1

## Workpiece gripping error

**Play occurs in the finger section, causing erroneous gripping to require frequent stopping of equipment and hand replacement.**

### With the HP Series

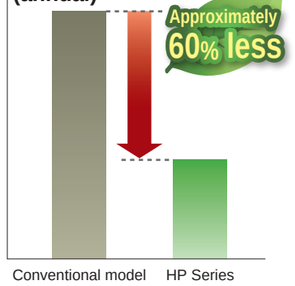
Since the rigidity of the guide is increased significantly, backlash is suppressed for long periods. The number of unexplained stoppages and the number of replacements were greatly reduced.

- Momentary stops greatly reduced
- Number of replacements greatly reduced
- Significant reduction in replacement time
- Durability count Over 20 million cycles*

*Subject to CKD prescribed conditions

| Linear Slide Hand | Low-profile long stroke hand | Wide parallel hand |
|---|---|---|
| LSH | LST | HMC |

$CO_2$ emissions comparison (annual)




Problem #2

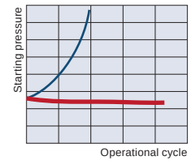
## Motion slows down

**Sliding resistance increases due to packing wear and loss of lubrication, resulting in frequent unexplained stoppages due to delayed operation.**

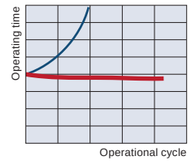
### With the HP Series

Since the sliding part is optimized, sliding resistance is stable for long periods and the occurrence of operation delay is suppressed. The number of unexplained stoppages can be greatly reduced.

Change in starting pressure

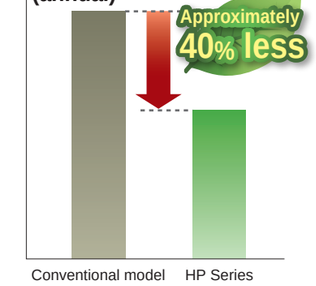



Change in tact time




| Linear slide cylinder | Guided cylinder | Small compact cylinder with high precision guide |
|---|---|---|
| LCR | STG | MSDG |

$CO_2$ emissions comparison (annual)




### Handling process

### Inspection process

High-Durability Component "HP Series"

Problem #3

## Easily damaged by high frequency operation

**Air leakage may occur due to packing wear or lubricant shortage, causing frequent stopping of the equipment and cylinder replacement.**

### With the HP Series

By adopting grease that supports high frequency usage and optimizing the sealing function, the generation of air leakage is suppressed for long periods of time. The number of unexplained stoppages and the number of replacements were greatly reduced.

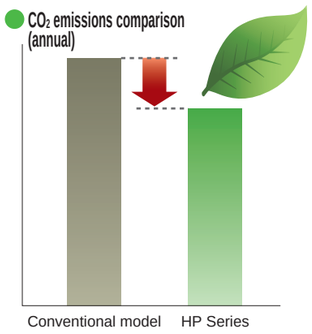
- Momentary stops greatly reduced
- Number of replacements greatly reduced
- Durability count Over 20 million cycles*

*Subject to CKD prescribed conditions

| Compact cylinder | Compact cylinder | Round shaped cylinder |
|---|---|---|
| SSD2 | SMG | SCM |

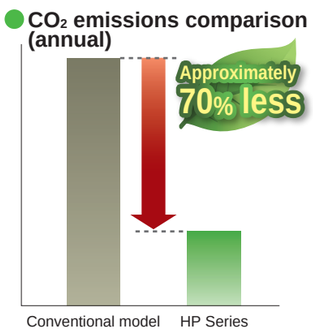
### Conveyance Process

$CO_2$ emissions comparison (annual)




### Dust environment

$CO_2$ emissions comparison (annual)




Problem #4

## Air leakage in dust environments

**Abnormal wear of the packing or lubricant shortage due to dust leads to air leakage, and therefore unexplained stoppages and frequent cylinder replacements are necessary.**

### With the HP Series

Equipped with a powerful dust entry prevention + lubrication holding mechanism, suppressing air leakage for long periods of time. The number of replacements has been greatly reduced.

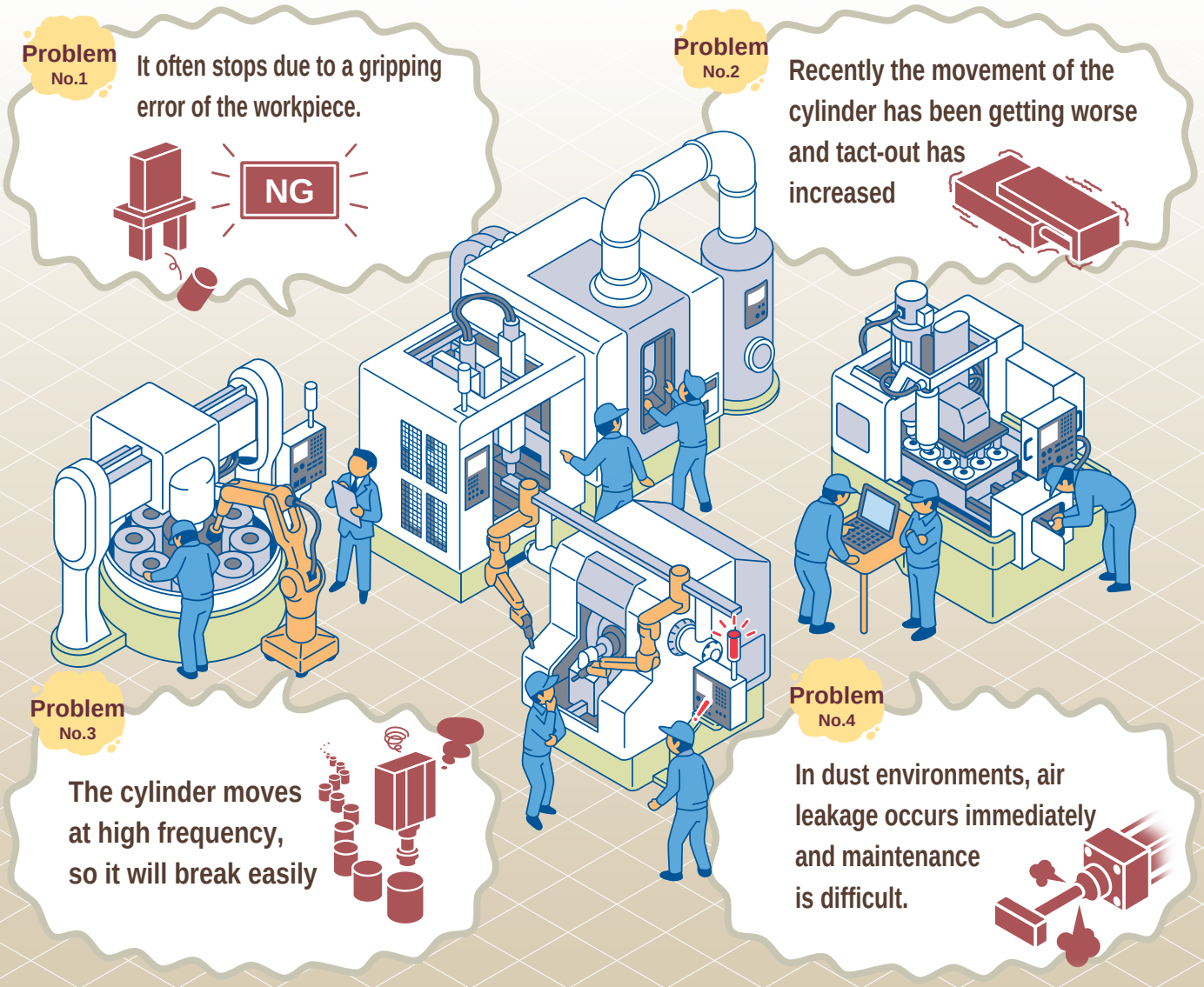
- Momentary stops greatly reduced
- Number of replacements greatly reduced
- Improved environmental resistance
- Durability count over 5 million cycles*

*Subject to CKD prescribed conditions

| Small bore size cylinder | Tie rod cylinder | Guided cylinder |
|---|---|---|
| CMK2-G | SCG-G | STG-$^{M}_{B}$G |

# Do you replace the cylinder at the same point several times a year?

## Is it replaced more than three times a year?




# With the HP Series, the frequency of maintenance is reduced!



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