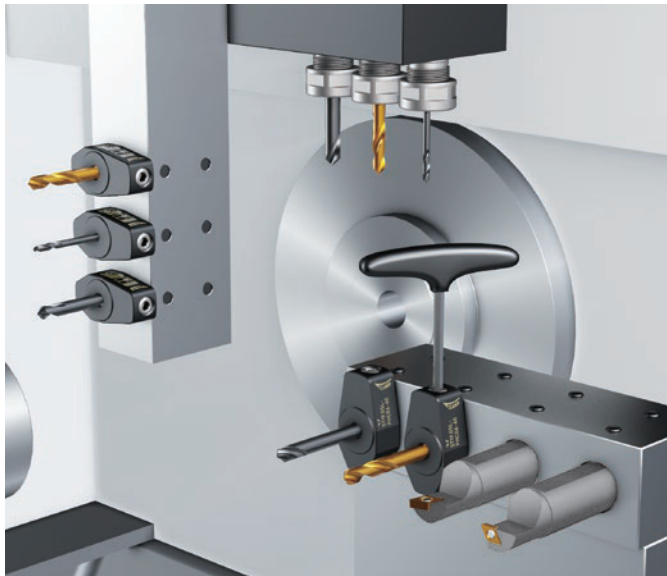




# CNC ST•L-PHC

Hydro Chuck for CNC automatic lathe



Efficient tool changing in tight machine spaces!

**Shank Size**  
ST16L, ST19.05L, ST20L,  
ST22L, ST25L, ST25.4L

ø3.0~ø12.0 mm



Picture shown is image only. When using the product, secure the chuck on the fixture before clamping a cutting tool.

Movie (English)



Improvement example: The setup time has been reduced by 63%! \*Centering process is omitted.

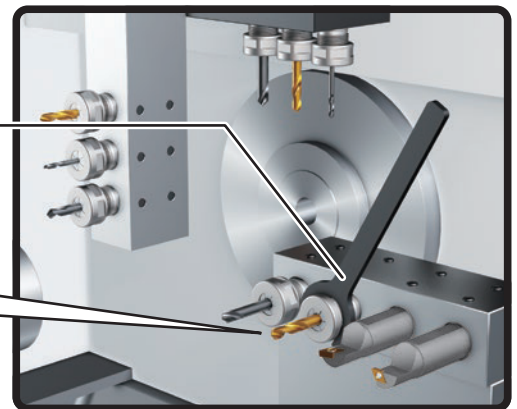
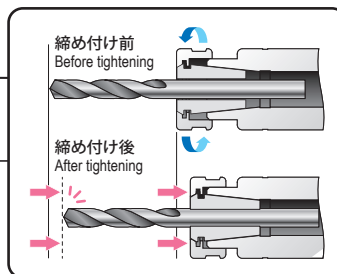
## Before Collet Holder

Set-up time **1 min 18 sec**

❌ Tool change is difficult in tight spaces

❌ Tool pre-set with height offset

❌ Accuracy varies between repeated tool changes



## After Hydro Chuck

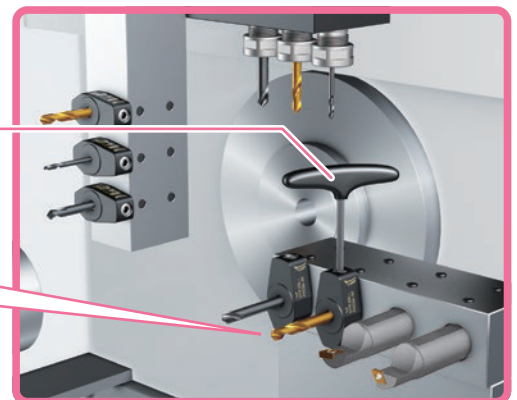
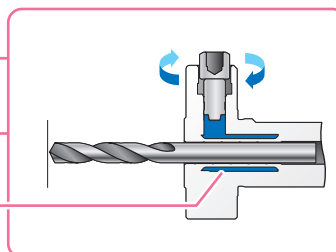
Set-up time **0 min 29 sec**

✅ Easy chucking with a single wrench

✅ Tool pre-set without height offset

✅ Good repeatability (1 μm)

✅ Anti-vibration effect provides longer tool life



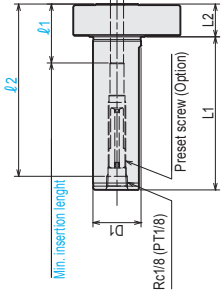


# ST·L-PHC

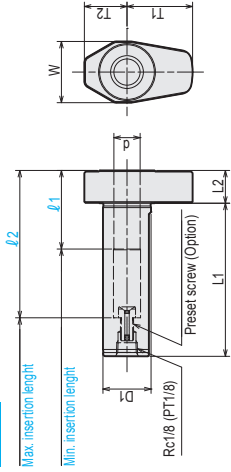
CNC  
Hydro Chuck for CNC automatic lathe

Efficient tool changing in tight machine spaces!

Type1



Type2



⚠ Caution : Strictly keep the min insertion length.

| Code          | Model    | Type       | d | D1 | L1    | L2 | W  | T1 | T2   | ℓ1   | ℓ2 | Wrench(Optional) |
|---------------|----------|------------|---|----|-------|----|----|----|------|------|----|------------------|
| 0470 01603050 | ST16L    | -PHC03 -50 | 1 | 3  | 16    | 50 | 15 | 22 | 23   | 17.5 | 16 | 58               |
| 0470 01604050 |          | -PHC04 -50 | 1 | 4  | 16    | 50 | 15 | 22 | 23   | 17.5 | 19 | 58               |
| 0470 01606050 |          | -PHC06 -50 | 1 | 6  | 16    | 50 | 15 | 22 | 24.5 | 18.5 | 27 | 58               |
| 0470 01608050 |          | -PHC08 -50 | 2 | 8  | 16    | 50 | 15 | 24 | 25.5 | 19.5 | 27 | 47               |
| 0470 12403060 | ST19.05L | -PHC03 -60 | 1 | 3  | 19.05 | 60 | 15 | 22 | 23   | 17.5 | 16 | 68               |
| 0470 12404060 |          | -PHC04 -60 | 1 | 4  | 19.05 | 60 | 15 | 22 | 23   | 17.5 | 19 | 68               |
| 0470 12406060 |          | -PHC06 -60 | 1 | 6  | 19.05 | 60 | 15 | 22 | 24.5 | 18.5 | 27 | 68               |
| 0470 12408060 |          | -PHC08 -60 | 2 | 8  | 19.05 | 60 | 15 | 24 | 25.5 | 19.5 | 27 | 57               |
| 0470 12410060 |          | -PHC10 -60 | 2 | 10 | 19.05 | 60 | 15 | 26 | 26.5 | 20.5 | 33 | 60               |
| 0470 02003070 | ST20L    | -PHC03 -70 | 1 | 3  | 20    | 70 | 15 | 22 | 23   | 17.5 | 16 | 78               |
| 0470 02004070 |          | -PHC04 -70 | 1 | 4  | 20    | 70 | 15 | 22 | 23   | 17.5 | 19 | 78               |
| 0470 02006070 |          | -PHC06 -70 | 1 | 6  | 20    | 70 | 15 | 22 | 24.5 | 18.5 | 27 | 78               |
| 0470 02008070 |          | -PHC08 -70 | 2 | 8  | 20    | 70 | 15 | 24 | 25.5 | 19.5 | 27 | 64               |
| 0470 02010070 |          | -PHC10 -70 | 2 | 10 | 20    | 70 | 15 | 26 | 26.5 | 20.5 | 33 | 67               |
| 0470 02203070 | ST22L    | -PHC03 -70 | 1 | 3  | 22    | 70 | 15 | 24 | 23   | 17.5 | 16 | 78               |
| 0470 02204070 |          | -PHC04 -70 | 1 | 4  | 22    | 70 | 15 | 24 | 23   | 17.5 | 19 | 78               |
| 0470 02206070 |          | -PHC06 -70 | 1 | 6  | 22    | 70 | 15 | 24 | 24.5 | 18.5 | 27 | 78               |
| 0470 02208070 |          | -PHC08 -70 | 2 | 8  | 22    | 70 | 15 | 24 | 25.5 | 19.5 | 27 | 64               |
| 0470 02210070 |          | -PHC10 -70 | 2 | 10 | 22    | 70 | 15 | 26 | 26.5 | 20.5 | 33 | 67               |
| 0470 02212070 |          | -PHC12 -70 | 2 | 12 | 22    | 70 | 15 | 28 | 29   | 21.5 | 36 | 67               |
| 0470 02503070 | ST25L    | -PHC03 -70 | 1 | 3  | 25    | 70 | 15 | 28 | 23   | 17.5 | 16 | 78               |
| 0470 02504070 |          | -PHC04 -70 | 1 | 4  | 25    | 70 | 15 | 28 | 23   | 17.5 | 19 | 78               |
| 0470 02506070 |          | -PHC06 -70 | 1 | 6  | 25    | 70 | 15 | 28 | 24.5 | 18.5 | 27 | 78               |
| 0470 02508070 |          | -PHC08 -70 | 2 | 8  | 25    | 70 | 15 | 28 | 25.5 | 19.5 | 27 | 64               |
| 0470 02510070 |          | -PHC10 -70 | 2 | 10 | 25    | 70 | 15 | 28 | 26.5 | 20.5 | 33 | 67               |
| 0470 02512070 |          | -PHC12 -70 | 2 | 12 | 25    | 70 | 15 | 28 | 29   | 21.5 | 36 | 67               |
| 0470 13203070 | ST25.4L  | -PHC03 -70 | 1 | 3  | 25.4  | 70 | 15 | 28 | 23   | 17.5 | 16 | 78               |
| 0470 13204070 |          | -PHC04 -70 | 1 | 4  | 25.4  | 70 | 15 | 28 | 23   | 17.5 | 19 | 78               |
| 0470 13206070 |          | -PHC06 -70 | 1 | 6  | 25.4  | 70 | 15 | 28 | 24.5 | 18.5 | 27 | 78               |
| 0470 13208070 |          | -PHC08 -70 | 2 | 8  | 25.4  | 70 | 15 | 28 | 25.5 | 19.5 | 27 | 64               |
| 0470 13210070 |          | -PHC10 -70 | 2 | 10 | 25.4  | 70 | 15 | 28 | 26.5 | 20.5 | 33 | 67               |
| 0470 13212070 |          | -PHC12 -70 | 2 | 12 | 25.4  | 70 | 15 | 28 | 29   | 21.5 | 36 | 67               |

1. Tool shank diameter tolerance must be within h6.

2. Secure the chuck on the fixture before clamping a cutting tool.

3. On 3mm and 4mm chuck models there may be leaking from the inner diameter slit when using center through coolant.

Ordering Example

ST16L - PHC03 - 50

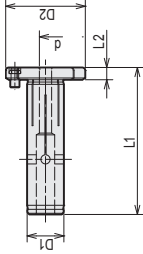
Shank size

Shank length

I.D.

## Collet with stopper pin

| Code        | Model          | D1 | L1 | L2 | φ |
|-------------|----------------|----|----|----|---|
| 3940 300512 | PHS12 - φ - OH | 12 | 26 | 48 | 4 |
| 3940 300612 | PHS12 - φ - C  | 12 | 26 | 48 | 4 |

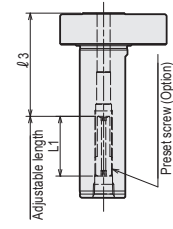
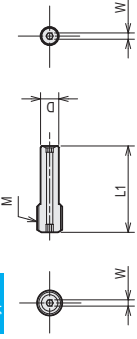


The PHS12 collet with stopper pin can be used with PHC12 only.

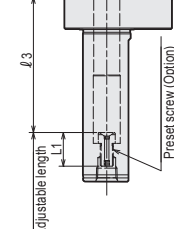
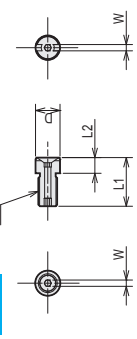
## Preset screw

| Code          | Model         | Type | L1   | L2 | D   | W | M         |
|---------------|---------------|------|------|----|-----|---|-----------|
| 0474 00004275 | PHCL-P04-27.5 | 1    | 27.5 | —  | 3.8 | 2 | M8 P=1.25 |
| 0474 00006275 | PHCL-P06-27.5 | 1    | 27.5 | —  | 5.8 | 2 |           |
| 0474 00008155 | PHCL-P08-15.5 | 2    | 15.5 | 5  | 7.8 | 2 |           |
| 0474 00008205 | PHCL-P08-20.5 | 2    | 20.5 | 10 | 7.8 | 2 |           |
| 0474 00008255 | PHCL-P08-25.5 | 2    | 25.5 | 15 | 7.8 | 2 |           |
| 0474 00008305 | PHCL-P08-30.5 | 2    | 30.5 | 20 | 7.8 | 2 | M6 P=1.0  |
| 0474 00008355 | PHCL-P08-35.5 | 2    | 35.5 | 25 | 7.8 | 2 |           |
| 0474 00008405 | PHCL-P08-40.5 | 2    | 40.5 | 30 | 7.8 | 2 |           |

Type1



Type2



Ordering Example

PHCL - P04 - 27.5

I.D. Total length (L1)

## Adjustable amount with preset screw

| Preset screw model | Matched chuck         | Type | L1   | φ3      |
|--------------------|-----------------------|------|------|---------|
| PHCL-P04-27.5      | ST16L - PHC03 - 50    | 1    | 27.5 | 17 ~ 30 |
|                    | - PHC04 - 50          | 1    | 27.5 | 19 ~ 30 |
|                    | ST19.05L - PHC03 - 60 | 1    | 27.5 | 19 ~ 40 |
|                    | - PHC04 - 60          | 1    | 27.5 | 19 ~ 40 |
|                    | ST20L - PHC03 - 70    | 1    | 27.5 | 17 ~ 50 |
|                    | - PHC04 - 70          | 1    | 27.5 | 19 ~ 50 |
|                    | ST22L - PHC03 - 70    | 1    | 27.5 | 17 ~ 50 |
|                    | - PHC04 - 70          | 1    | 27.5 | 19 ~ 50 |
| PHCL-P06-27.5      | ST25L - PHC03 - 70    | 1    | 27.5 | 17 ~ 50 |
|                    | - PHC04 - 70          | 1    | 27.5 | 19 ~ 50 |
|                    | ST25.4L - PHC03 - 70  | 1    | 27.5 | 17 ~ 50 |
|                    | - PHC04 - 70          | 1    | 27.5 | 19 ~ 50 |
|                    | ST16L - PHC06 - 60    | 1    | 27.5 | 27 ~ 30 |
|                    | ST19.05L - PHC06 - 60 | 1    | 27.5 | 27 ~ 40 |
|                    | ST20L - PHC06 - 70    | 1    | 27.5 | 27 ~ 50 |
|                    | ST22L - PHC06 - 70    | 1    | 27.5 | 27 ~ 50 |
| PHCL-P08-27.5      | ST25L - PHC06 - 70    | 1    | 27.5 | 27 ~ 50 |
|                    | ST25.4L - PHC06 - 70  | 1    | 27.5 | 27 ~ 50 |

| Model       | Matched chuck         | Type | L1 = 15.5 | L1 = 20.5 | L1 = 25.5 | L1 = 30.5 | L1 = 35.5 | L1 = 40.5 |
|-------------|-----------------------|------|-----------|-----------|-----------|-----------|-----------|-----------|
| PHCL-P08-L1 | ST16L - PHC08 - 50    | 2    | 35 ~ 42   | 30 ~ 37   | 27 ~ 32   | —         | —         | —         |
|             | ST19.05L - PHC08 - 60 | 2    | 45 ~ 52   | 40 ~ 47   | 35 ~ 42   | 30 ~ 37   | 27 ~ 32   | —         |
|             | - PHC10 - 60          | 2    | 49 ~ 52   | 44 ~ 47   | 39 ~ 42   | 34 ~ 37   | —         | —         |
|             | ST20L - PHC08 - 70    | 2    | 52 ~ 59   | 47 ~ 54   | 42 ~ 49   | 37 ~ 44   | 32 ~ 39   | 27 ~ 34   |
|             | - PHC10 - 70          | 2    | 56 ~ 62   | 51 ~ 57   | 46 ~ 52   | 41 ~ 47   | 36 ~ 42   | 33 ~ 37   |
|             | ST22L - PHC08 - 70    | 2    | 52 ~ 59   | 47 ~ 54   | 42 ~ 49   | 37 ~ 44   | 32 ~ 39   | 27 ~ 34   |
|             | - PHC10 - 70          | 2    | 56 ~ 62   | 51 ~ 57   | 46 ~ 52   | 41 ~ 47   | 36 ~ 42   | 33 ~ 37   |
|             | ST25L - PHC12 - 70    | 2    | 56 ~ 62   | 51 ~ 57   | 46 ~ 52   | 41 ~ 47   | 36 ~ 42   | —         |
|             | - PHC10 - 70          | 2    | 52 ~ 59   | 47 ~ 54   | 42 ~ 49   | 37 ~ 44   | 32 ~ 39   | 27 ~ 34   |
|             | - PHC10 - 70          | 2    | 56 ~ 62   | 51 ~ 57   | 46 ~ 52   | 41 ~ 47   | 36 ~ 42   | 33 ~ 37   |
|             | ST25.4L - PHC12 - 70  | 2    | 56 ~ 62   | 51 ~ 57   | 46 ~ 52   | 41 ~ 47   | 36 ~ 42   | —         |
|             | - PHC10 - 70          | 2    | 52 ~ 59   | 47 ~ 54   | 42 ~ 49   | 37 ~ 44   | 32 ~ 39   | 27 ~ 34   |