

NT
NT TOOL

**HYDRO
CHUCK** **OMEGA**

PHC·H

NO MORE

**PULLOUT, CHATTER OR
DEFLECTION!**

STEP ON UP

**TO HIGH-EFFICIENCY
MACHINING!**



NT NT TOOL



Product Movie

Hydro Chuck Omega

No more pullout, chatter or deflection!
Step on up to high-efficiency machining!

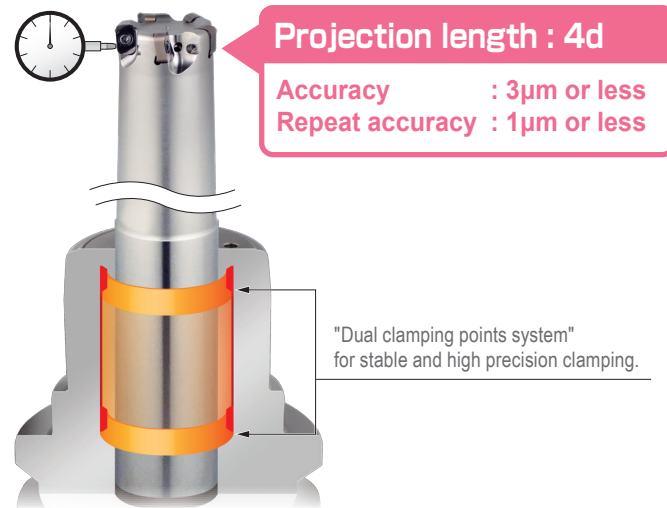
- Easy! Quick! Simple Clamping!
- Max. rotational speed : MAX. 20,000min⁻¹
- I.D. : $\phi 16.0\text{mm} \sim \phi 42.0\text{mm}$, $\phi 0625 \sim \phi 1500$
- Accuracy : 3 μm
- Repeat Accuracy : 1 μm
- Anti-vibration effect provides better surface

Available in various spindle interfaces

- CAT..... p.4
- BT..... p.6
- HSK-A... p.8
- UTS..... p.10
- AHO..... p.12

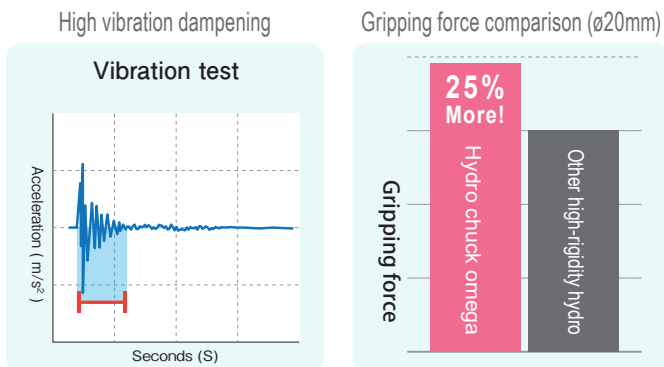


High precision

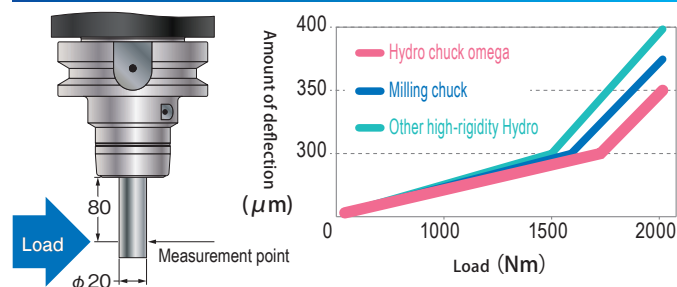


Anti-vibration effect & High clamping force

Special oil chamber around the chucking sleeve absorbs cutting vibrations. Utilizes stronger gripping force than a conventional hydro chuck.



High rigidity



High balance

Pre-balanced design and individual balancing for each product allows for high rotational speeds.

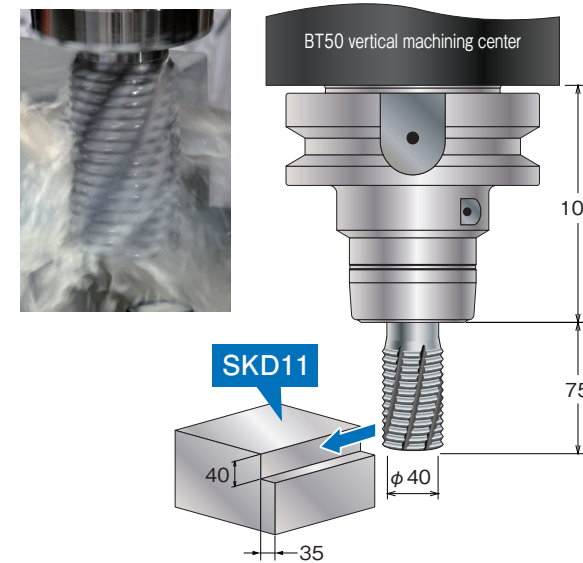
Max. rotational speed : Max. 20,000min⁻¹

*BT40-PHC16H-45, HSK63-PHC16H-80. Max rotational speed for other holders can be found on the dimensions page.

Machining example

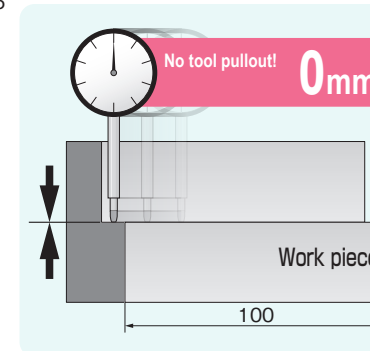
$\phi 40\text{mm}$ 6 flute end mill machining

High gripping force prevents tool pullout!

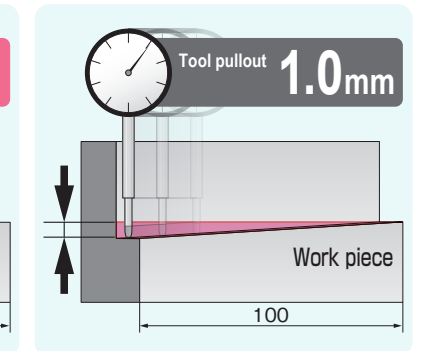


Rotational speed	212 min ⁻¹	Feed rate	0.5 mm/rev
Feed	106 mm/min	Coolant	External Oil Supply
Peripheral speed	21.3 m/min		

Hydro Chuck Omega



Other high-rigidity Hydro



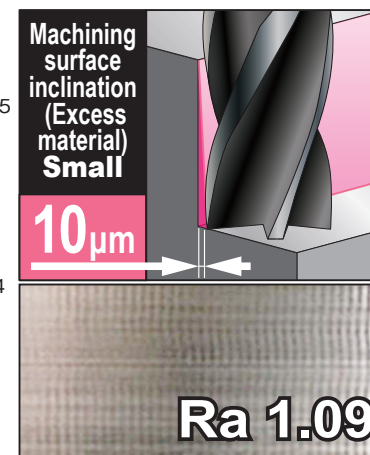
$\phi 20\text{mm}$ carbide 4 flute square end mill machining

High rigidity and accuracy reduce inclination of machining surface!

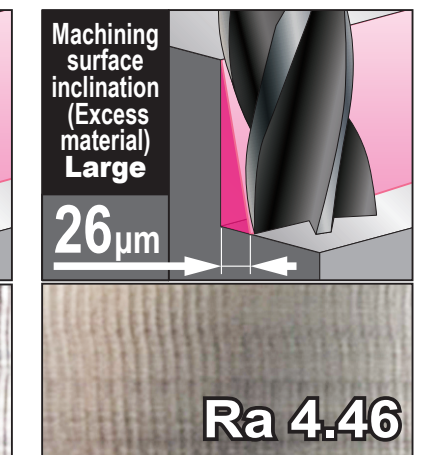


Rotational speed	6,350 min ⁻¹	Feed rate	0.56 mm/rev
Feed	3,570 mm/min	Coolant	External Oil Supply
Peripheral speed	398.7 m/min	Recommended Feed	F=2,100 mm/min

Hydro Chuck Omega



Other high-rigidity Hydro



Eliminating excess material after milling reduces the need to zero cut and reduces machining in later steps.

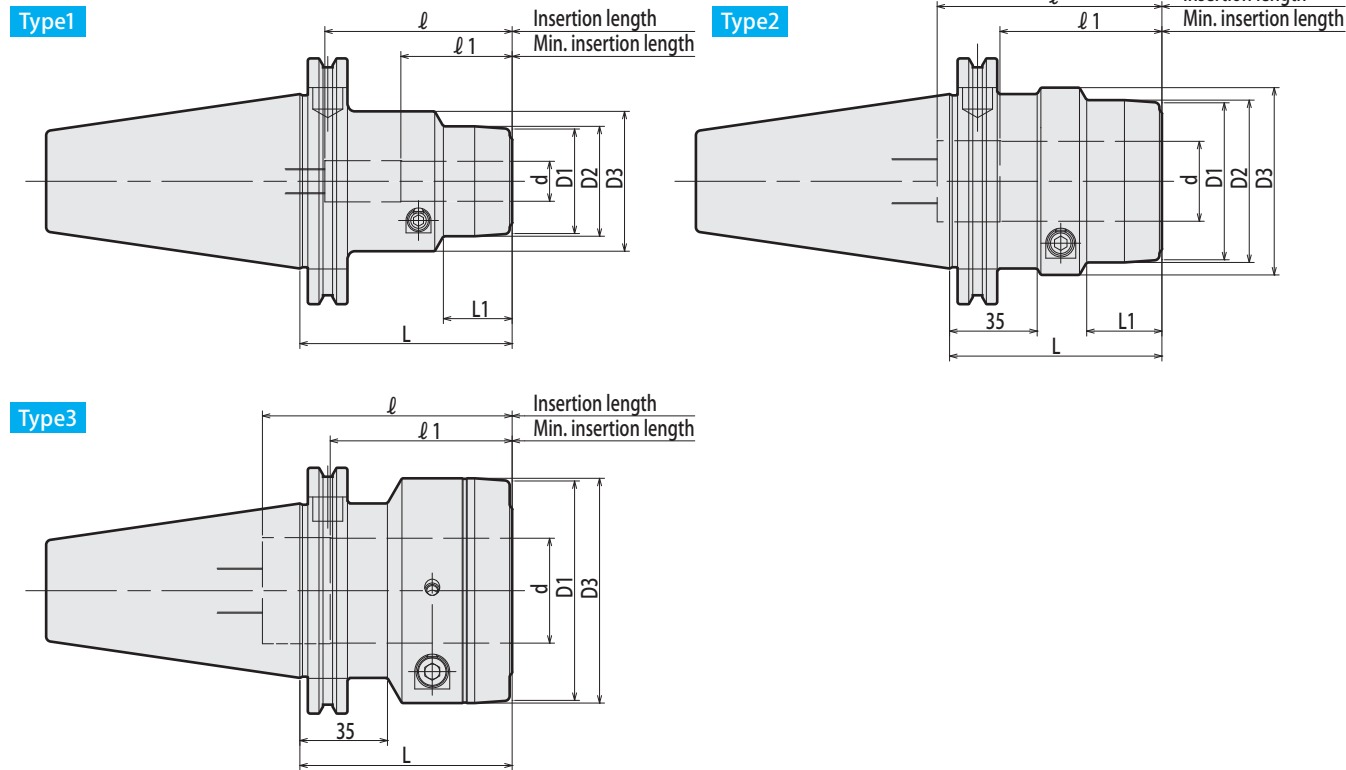
This all leads to reduced cycle times!



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Hydro Chuck Ω

- High Rigidity Hydro Chuck is the best holder for high efficiency rough machining.



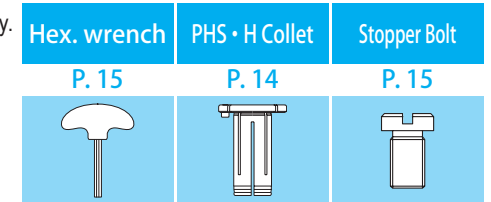
Metric Sizes

Unit : Metric

Code	Model	Type	d	L	L1	D1	D2	D3	ℓ	ℓ1	Wrench (Option)
1820 01416060	CAT40 -PHC16H -60	3	16	60	—	42	—	56	70	45	L-4T
1820 01416085	-85	2	16	85	27	42	44	56	85	45	
1820 01420085	-PHC20H -85	2	20	85	26	48	50	60	80	50	
1820 01420105	-105	2	20	105	32	48	50	60	110	50	L-5T
1820 01425085	-PHC25H -85	2	25	85	25	58	60	69	80	55	
1820 01425105	-105	2	25	105	35	58	60	69	110	55	
1820 01432120	-PHC32H -120	2	32	120	47	63	65	75	105	65	L-5T
1820 01432135	-135	2	32	135	47	63	65	75	120	65	
1820 01516085	CAT50 -PHC16H -85	1	16	85	27	42	44	56	75	45	
1820 01516105	-105	1	16	105	27	42	44	56	95	45	
1820 01520085	-PHC20H -85	1	20	85	32	48	50	60	90	50	
1820 01520105	-105	1	20	105	32	48	50	60	110	50	L-5T
1820 01525085	-PHC25H -85	1	25	85	35	58	60	69	90	55	
1820 01525105	-105	1	25	105	35	58	60	69	110	55	
1820 01525135	-135	1	25	135	35	58	60	69	110	55	L-5T
1820 01532085	-PHC32H -85	2	32	85	32	63	65	75	90	65	
1820 01532105	-105	2	32	105	47	63	65	75	120	65	
1820 01532135	-135	2	32	135	47	63	65	75	120	65	L-6T
1820 01542085	-PHC42H -85	2	42	85	—	74	—	90	100	73	
1820 01542105	-105	2	42	105	46	78	80	90	120	73	
1820 01542135	-135	2	42	135	52	78	80	90	120	73	

1. PHC20H, PHC32H, PHC0750H, and PHC1250H have pin holes for collet with stopper pin on its body.
2. Tool shank diameter tolerance must be within h7.
A tolerance of h6 or 0/-0.01 is recommended when newly making a cutting tool.
3. Hex-head screws (included) are necessary to plug air hole for center through coolant feed.
4. Permissible speed is greatly affected by the stiffness of the machine spindle and the balance of the cutting tool. Gradually increase from a low speed, and use at the proper speed.

! Hex-head screws with sealed thread (included) are necessary to plug the air holes for coolant through operation. For details on installing the hex head screws, please refer to the instruction manual in the screws' packaging.



Ordering Example

CAT40 - PHC16H - 60
Shank size I.D. Projection length

Inch Sizes

Unit : Inch

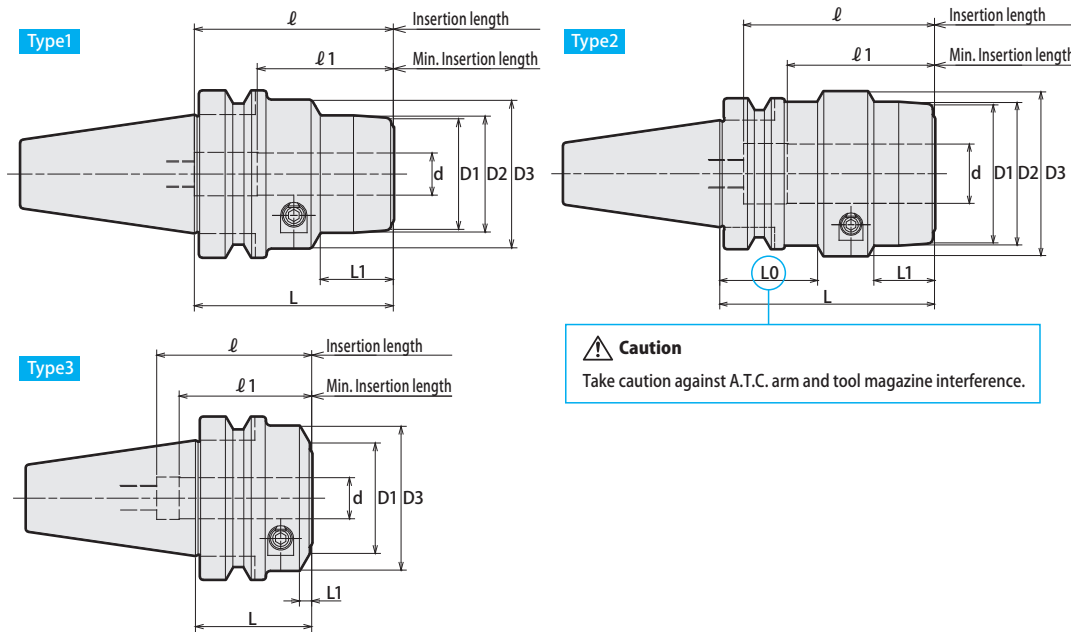
Code	Model	Type	d	L	L1	D1	D2	D3	ℓ	ℓ1	Wrench (Option)
2582 00004000	CAT40 -PHC0625H -60	3	0.625	2.362	—	1.654	—	2.205	2.756	1.772	L-4T
2582 00005000	-85	2	0.625	3.346	1.063	1.654	1.732	2.205	3.346	1.772	
2582 00006000	-PHC0750H -85	2	0.750	3.346	1.024	1.890	1.969	2.362	3.150	1.969	
2582 00007000	-105	2	0.750	4.134	1.260	1.890	1.969	2.362	4.331	1.969	L-5T
2582 00008000	-PHC1000H -85	2	1.000	3.346	0.984	2.283	2.362	2.717	3.150	2.165	
2582 00009000	-105	2	1.000	4.134	1.378	2.283	2.362	2.717	4.331	2.165	
2582 00010000	-PHC1250H -120	2	1.250	4.724	1.850	2.480	2.559	2.953	4.134	2.559	L-4T
2582 00011000	-135	2	1.250	5.315	1.850	2.480	2.559	2.953	4.724	2.559	
2582 00012000	CAT50 -PHC0625H -85	1	0.625	3.346	1.063	1.654	1.732	2.205	2.953	1.772	
2582 00013000	-105	1	0.625	4.134	1.063	1.654	1.732	2.205	3.740	1.772	L-5T
2582 00014000	-PHC0750H -85	1	0.750	3.346	1.260	1.890	1.969	2.362	3.543	1.969	
2582 00015000	-105	1	0.750	4.134	1.260	1.890	1.969	2.362	4.331	1.969	
2582 00016000	-PHC1000H -85	1	1.000	3.346	1.378	2.283	2.362	2.717	3.543	2.165	L-5T
2582 00017000	-105	1	1.000	4.134	1.378	2.283	2.362	2.717	4.331	2.165	
2582 00018000	-135	1	1.000	5.315	1.378	2.283	2.362	2.717	4.331	2.165	
2582 00019000	-PHC1250H -85	2	1.250	3.346	1.260	2.480	2.559	2.953	3.543	2.559	L-6T
2582 00020000	-105	2	1.250	4.134	1.850	2.480	2.559	2.953	4.724	2.559	
2582 00021000	-135	2	1.250	5.315	1.850	2.480	2.559	2.953	4.724	2.559	
2582 00022000	-PHC1500H -85	2	1.500	3.346	—	2.913	—	3.543	3.937	2.874	L-6T
2582 00023000	-105	2	1.500	4.134	1.811	3.071	3.150	3.543	4.724	2.874	
2582 00024000	-135	2	1.500	5.315	2.047	3.071	3.150	3.543	4.724	2.874	



PHC-H

Hydro Chuck Ω

- High Rigidity Hydro Chuck is the best holder for high efficiency rough machining.



Inch Sizes

Unit : Inch

Code	Model	Type	d	L	L1	D1	D2	D3	L0	ℓ	ℓ1	Wrench (Option)
2582 00040000	BT40 -PHC0625H -45	3	0.625	1.772	0.709	1.654	—	2.205	—	2.362	1.772	L-4T
2582 00041000	-75	1	0.625	2.953	1.063	1.654	1.732	2.205	—	3.346	1.772	
2582 00042000	-PHC0750H -75	1	0.750	2.953	1.260	1.890	1.969	2.362	—	3.150	1.969	
2582 00043000	-105	1	0.750	4.134	1.260	1.890	1.969	2.362	—	3.740	1.969	L-5T
2582 00044000	-PHC1000H -75	2	1.000	2.953	0.984	2.283	2.362	2.717	1.220	3.150	2.165	
2582 00045000	-105	2	0.965	4.134	1.378	2.283	2.362	2.717	1.535	4.331	2.165	
2582 00046000	-PHC1250H -105	2	1.250	4.134	1.575	2.480	2.559	2.953	1.535	3.543	2.559	L-4T
2582 00047000	-135	2	1.250	5.315	1.850	2.480	2.559	2.953	1.535	4.724	2.559	
2582 00048000	BT50 -PHC0625H -75	1	0.625	2.953	0.669	—	1.732	2.205	—	2.953	1.772	L-4T
2582 00049000	-105	1	0.625	4.134	1.063	1.654	1.732	2.205	—	4.134	1.772	
2582 00050000	-PHC0750H -75	1	0.750	2.953	0.669	—	1.969	2.362	—	3.150	1.969	
2582 00051000	-105	1	0.750	4.134	1.260	1.890	1.969	2.362	—	4.331	1.969	L-5T
2582 00052000	-PHC1000H -75	1	1.000	2.953	0.669	—	2.362	2.717	—	3.150	2.165	
2582 00053000	-105	1	1.000	4.134	1.378	2.283	2.362	2.717	—	4.331	2.165	
2582 00054000	-135	1	1.000	5.315	1.378	2.283	2.362	2.717	—	4.331	2.165	L-5T
2582 00055000	-PHC1250H -75	1	1.250	2.953	0.669	—	2.559	2.953	—	3.543	2.559	
2582 00056000	-105	1	1.250	4.134	1.850	2.480	2.559	2.953	—	4.724	2.559	
2582 00057000	-135	1	1.250	5.315	1.850	2.480	2.559	2.953	—	4.724	2.559	L-6T
2582 00058000	-PHC1500H -75	1	1.500	2.953	1.457	—	2.913	3.543	—	3.937	2.874	
2582 00059000	-105	1	1.500	4.134	1.811	3.071	3.150	3.543	—	5.118	2.874	
2582 00060000	-135	1	1.500	5.315	2.047	3.071	3.150	3.543	—	5.118	2.874	

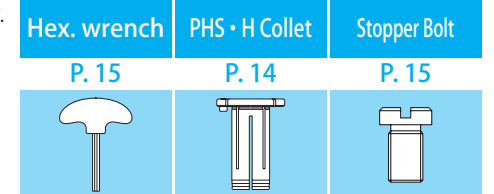
Metric Sizes

Unit : Metric

Code	Model	Type	d	L	L1	D1	D2	D3	L0	ℓ	ℓ1	Max. min ⁻¹	kg	Wrench (Option)
2580 00316045	BT40 -PHC16H - 45	3	16	45	18	42	—	56	—	60	45	20,000	1.2	L-4T
2580 00316075	- 75	1	16	75	27	42	44	56	—	85	45	20,000	1.5	
2580 00320075	-PHC20H - 75	1	20	75	32	48	50	60	—	80	50	20,000	1.6	
2580 00320105	-105	1	20	105	32	48	50	60	—	95	50	20,000	2.1	L-5T
2580 00325075	-PHC25H - 75	2	25	75	25	58	60	69	31	80	55	16,000	1.8	
2580 00325105	-105	2	25	105	35	58	60	69	39	110	55	16,000	2.4	
2580 00332105	-PHC32H -105	2	32	105	40	63	65	75	39	90	65	12,000	2.4	L-4T
2580 00332135	-135	2	32	135	47	63	65	75	39	120	65	12,000	3.2	
2580 00516075	BT50 -PHC16H - 75	1	16	75	17	—	44	56	—	75	45	15,000	4.0	
2580 00516105	-105	1	16	105	27	42	44	56	—	105	45	15,000	4.4	L-4T
2580 00520075	-PHC20H - 75	1	20	75	17	—	50	60	—	80	50	15,000	4.1	
2580 00520105	-105	1	20	105	32	48	50	60	—	110	50	15,000	4.5	
2580 00525075	-PHC25H - 75	1	25	75	17	—	60	69	—	80	55	15,000	4.2	L-5T
2580 00525105	-105	1	25	105	35	58	60	69	—	110	55	15,000	4.8	
2580 00525135	-135	1	25	135	35	58	60	69	—	110	55	15,000	5.5	
2580 00532075	-PHC32H - 75	1	32	75	17	—	65	75	—	90	65	12,000	4.1	L-5T
2580 00532105	-105	1	32	105	47	63	65	75	—	120	65	12,000	4.6	
2580 00532135	-135	1	32	135	47	63	65	75	—	120	65	12,000	5.6	
2580 00542075	-PHC42H - 75	1	42	75	37	—	74	90	—	100	73	10,000	4.1	L-6T
2580 00542105	-105	1	42	105	46	78	80	90	—	130	73	10,000	5.0	
2580 00542135	-135	1	42	135	52	78	80	90	—	130	73	10,000	6.2	

1. PHC20H, PHC32H, PHC0750H, and PHC1250H have pin holes for collet with stopper pin on its body.
2. Tool shank diameter tolerance must be within h7.
A tolerance of h6 or 0/-0.01 is recommended when newly making a cutting tool.
3. Hex-head screws (included) are necessary to plug air hole for center through coolant feed.
4. Permissible speed is greatly affected by the stiffness of the machine spindle and the balance of the cutting tool. Gradually increase from a low speed, and use at the proper speed.

- ! Hex-head screws with sealed thread (included) are necessary to plug the air holes for coolant through operation. For details on installing the hex head screws, please refer to the instruction manual in the screws' packaging.



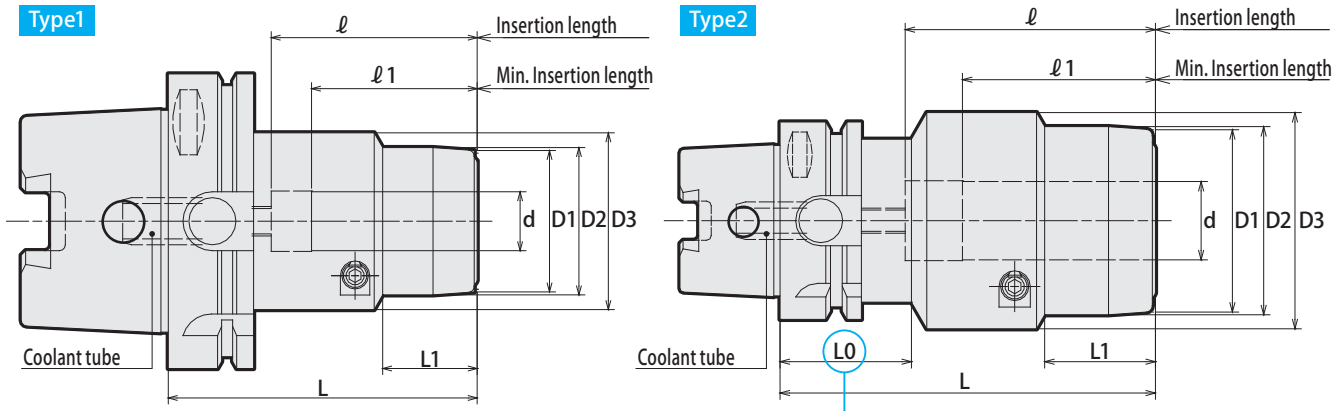
Ordering Example

BT40 - PHC16H - 45
Shank size I.D. Projection length

PHC-H

Hydro Chuck Ω

● High Rigidity Hydro Chuck is the best holder for high efficiency rough machining.



Caution
Take caution against A.T.C. arm and tool magazine interference.

Inch Sizes

Unit : Inch

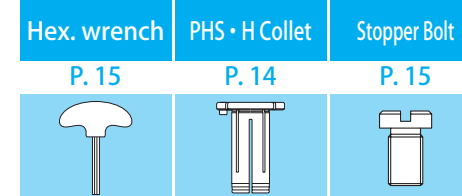
Code	Model	Type	d	L	L1	D1	D2	D3	L0	ℓ	ℓ1	Wrench (Option)
533200001000	HSK63A -PHC0625H -80-H	2	0.625	3.150	0.827	—	1.732	2.205	1.654	2.008	1.772	L-4T
533200002000	-PHC0750H -105-H	2	0.750	4.134	1.260	1.890	1.969	2.362	1.654	2.953	1.969	
533200003000	-PHC1000H -105-H	2	1.000	4.134	1.378	2.283	2.362	2.717	1.654	2.953	2.165	
533200004000	-PHC1250H -105-H	2	1.250	4.134	1.457	2.480	2.559	2.953	1.654	3.071	2.559	L-5T
533200005000	-135-H	2	1.250	5.315	1.850	2.480	2.559	2.953	1.654	4.134	2.559	L-4T
533200006000	HSK100A -PHC0625H -105-H	1	0.625	4.134	1.063	—	1.732	2.205	—	2.756	1.772	
533200007000	-PHC0750H -105-H	1	0.750	4.134	1.260	1.890	1.969	2.362	—	2.756	1.969	
533200008000	-PHC1000H -105-H	1	1.000	4.134	1.378	2.283	2.362	2.717	—	2.756	2.165	L-5T
533200009000	-135-H	1	1.000	5.315	1.378	2.283	2.362	2.717	—	3.937	2.165	
533200010000	-PHC1250H* -110-H	1	1.250	4.331	1.850	2.480	2.559	2.953	—	3.071	2.559	
533200011000	-135-H	1	1.250	5.315	1.850	2.480	2.559	2.953	—	3.937	2.559	L-6T
533200012000	-PHC1500H -135-H	2	1.500	5.315	2.047	3.071	3.150	3.543	—	4.331	2.874	

Metric Sizes

Unit : Metric

Code	Model	Type	d	L	L1	D1	D2	D3	L0	ℓ	ℓ1	Max. min ⁻¹	kg	Wrench (Option)
5330 75016080	HSK63A -PHC16H - 80 -H	2	16	80	21	—	44	56	42	51	45	20,000	1.4	L-4T
5330 75020105	-PHC20H -105 -H	2	20	105	32	48	50	60	42	75	50	20,000	1.8	
5330 75025105	-PHC25H -105 -H	2	25	105	35	58	60	69	42	75	55	16,000	2.1	
5330 75032105	-PHC32H -105 -H	2	32	105	37	63	65	75	42	78	65	12,000	2.1	L-5T
5330 75032135	-135 -H	2	32	135	47	63	65	75	42	105	65	12,000	2.9	
5330 77016105	HSK100A -PHC16H -105 -H	1	16	105	27	—	44	56	—	70	45	12,500	3.1	L-4T
5330 77020105	-PHC20H -105 -H	1	20	105	32	48	50	60	—	70	50	12,500	3.2	
5330 77025105	-PHC25H -105 -H	1	25	105	35	58	60	69	—	70	55	12,500	3.6	L-5T
5330 77025135	-135 -H	1	25	135	35	58	60	69	—	100	55	12,500	4.3	
5330 77032110	-PHC32H -110 -H	1	32	110	47	63	65	75	—	78	65	12,000	3.8	
5330 77032135	-135 -H	1	32	135	47	63	65	75	—	100	65	12,000	4.5	L-6T
5330 77042135	-PHC42H -135 -H	2	42	135	52	78	80	90	—	110	73	10,000	5.4	

1. PHC20H, PHC32H, PHC0750H, and PHC1250H have pin holes for collet with stopper pin on its body.
2. Tool shank diameter tolerance must be within h7.
A tolerance of h6 or 0/-0.01 is recommended when newly making a cutting tool.
3. Permissible speed is greatly affected by the stiffness of the machine spindle and the balance of the cutting tool.
Gradually increase from a low speed, and use at the proper speed.
4. Coolant tube is included.

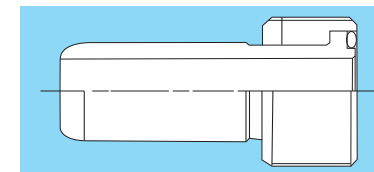


Ordering Example

(HSK63A~HSK100A) With manual clamp holes

HSK63A - PHC16H - 80 - H
Shank size I.D. Projection length With manual clamp holes

Coolant Tube



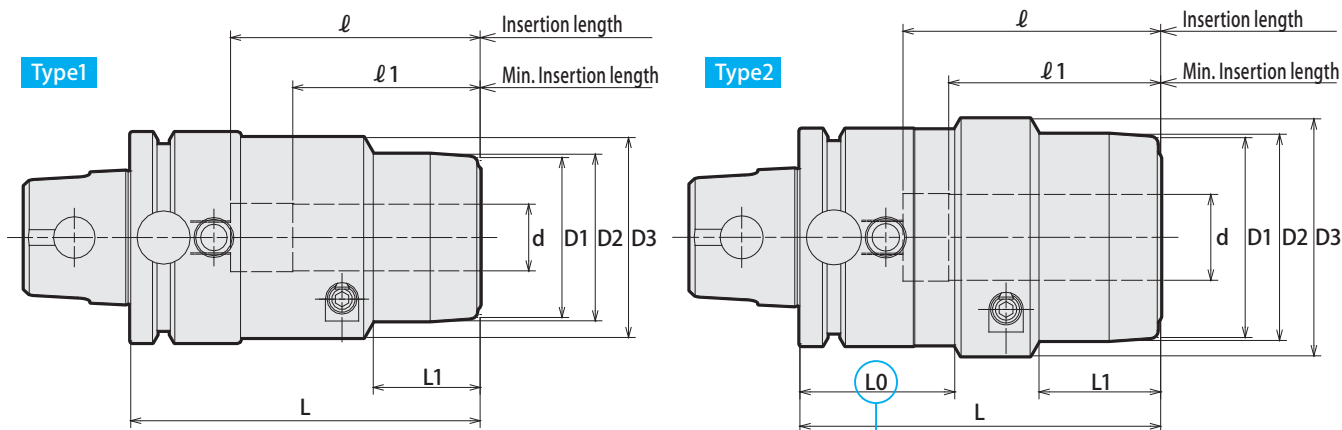
Code	Model
530300111000	HSK63A-CL-SET
530300112000	HSK100A-CL-SET

Coolant tube is available as replacement parts.

PHC-H

Hydro Chuck Ω

● High Rigidity Hydro Chuck is the best holder for high efficiency rough machining.



Caution
Take caution against A.T.C. arm and tool magazine interference.

Inch Sizes

Unit : Inch

Code Low Pressure Type	Code High Pressure Type	Model	Type	d	L	L1	D1	D2	D3	L0	ℓ	ℓ1	Wrench (Option)
1442 00002000	1442 00007000	UTS6350 -PHC0625H -75	1	0.625	2.953	0.984	1.654	1.732	2.205	—	2.008	1.772	L-4T
1442 00003000	1442 00008000	-PHC0750H -105	1	0.750	4.134	1.260	1.890	1.969	2.362	—	2.953	1.969	
1442 00004000	1442 00009000	-PHC1000H -105	2	1.000	4.134	1.378	2.283	2.362	2.717	1.732	2.953	2.165	L-5T
1442 00005000	1442 00010000	-PHC1250H -105	2	1.250	4.134	1.535	2.480	2.559	2.953	1.732	3.071	2.559	
1442 00006000	1442 00011000	-135	2	1.250	5.315	1.850	2.480	2.559	2.953	1.732	4.134	2.559	L-4T
1442 00012000	1442 00019000	UTS10080 -PHC0625H -105	1	0.625	4.134	1.063	1.654	1.732	2.205	—	2.756	1.772	
1442 00013000	1442 00020000	-PHC0750H -105	1	0.750	4.134	1.260	1.890	1.969	2.362	—	2.953	1.969	L-5T
1442 00014000	1442 00021000	-PHC1000H -105	1	1.000	4.134	1.378	2.283	2.362	2.717	—	2.953	2.165	
1442 00015000	1442 00022000	-135	1	1.000	5.315	1.378	2.283	2.362	2.717	—	4.134	2.165	L-5T
1442 00016000	1442 00023000	-PHC1250H -105	1	1.250	4.134	1.850	2.480	2.559	2.953	—	3.071	2.559	
1442 00017000	1442 00024000	-135	1	1.250	5.315	1.850	2.480	2.559	2.953	—	3.937	2.559	L-6T
1442 00018000	1442 00025000	-PHC1500H -135	1	1.500	5.315	2.047	3.071	3.150	3.543	—	4.331	2.874	

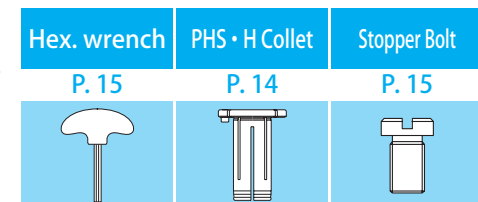
Metric Sizes

Unit : Metric

Code	Model	Type	d	L	L1	D1	D2	D3	L0	ℓ	ℓ1	Max. min ⁻¹	kg	Wrench (Option)
1440 0*216075	UTS6350 -PHC16H - 75	1	16	75	25	42	44	56	—	51	45	20,000	1.4	L-4T
1440 0*220105	-PHC20H -105	1	20	105	32	48	50	60	—	75	50	20,000	2.0	
1440 0*225105	-PHC25H -105	2	25	105	35	58	60	69	44	75	55	16,000	2.3	L-5T
1440 0*232105	-PHC32H -105	2	32	105	39	63	65	75	44	78	65	12,000	2.3	
1440 0*232135	-135	2	32	135	47	63	65	75	44	105	65	12,000	3.1	L-4T
1440 0*316105	UTS10080 -PHC16H -105	1	16	105	27	42	44	56	—	70	45	12,500	3.3	
1440 0*320105	-PHC20H -105	1	20	105	32	48	50	60	—	75	50	12,500	3.4	L-5T
1440 0*325105	-PHC25H -105	1	25	105	35	58	60	69	—	75	55	12,500	3.8	
1440 0*325135	-135	1	25	135	35	58	60	69	—	105	55	12,500	4.5	L-5T
1440 0*332105	-PHC32H -105	1	32	105	47	63	65	75	—	78	65	12,000	3.8	
1440 0*332135	-135	1	32	135	47	63	65	75	—	100	65	12,000	4.7	L-6T
1440 0*342135	-PHC42H -135	1	42	135	52	78	80	90	—	110	73	10,000	5.5	

In the Item Code, replace the * with 1 to indicate high pressure, and 0 to indicate low pressure.

- PHC20H, PHC32H, PHC0750H, and PHC1250H have pin holes for collet with stopper pin on its body.
- Tool shank diameter tolerance must be within h7.
A tolerance of h6 or 0/-0.01 is recommended when newly making a cutting tool.
- Permissible speed is greatly affected by the stiffness of the machine spindle and the balance of the cutting tool.
Gradually increase from a low speed, and use at the proper speed.



Ordering Example

Low pressure type
0 ~ 1.0MPa

UTS6350 - PHC16H - 75
Shank size I.D. Pojection length

Ordering Example

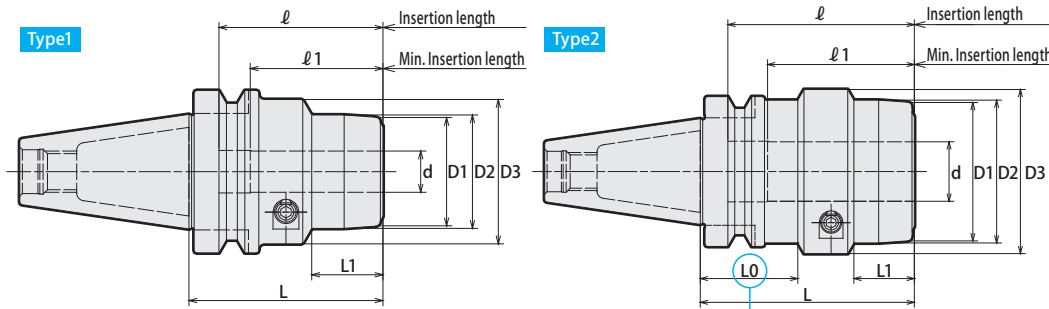
High pressure type
1.1 ~ 7.0MPa

UTS6350 - PHC16H - 75 - H
Shank size I.D. Pojection length High pressure type

PHC-H

Hydro Chuck Ω for BT Dual Contact Shank

- High Rigidity Hydro Chuck is the best holder for high efficiency rough machining.



⚠ Our two-face contact BT spindle (for NBT-AHO) is incompatible with BT two-face contact spindle (for WBT-AHO).
 • When AHO is used with center through coolant feeding, a designated retention stud (with coolant pipe) for AHO must be used.

⚠ **Caution**
 Take caution against A.T.C. arm and tool magazine interference.

Metric Sizes

Unit : Metric

Code	Model	Type	d	L	L1	D1	D2	D3	L0	ℓ	ℓ1	kg	Wrench (Option)
3710 60010000	WBT-AHO40 -PHC16H - 75	1	16	75	27	42	44	56	—	60	45	1.4	L-4T
3710 60020000	-PHC20H - 75	1	20	75	32	48	50	60	—	60	50	1.5	
3710 60030000	-105	1	20	105	32	48	50	60	—	90	50	2.0	
3710 60040000	-PHC25H - 80	2	25	80	25	58	60	69	36	65	55	1.8	L-5T
3710 60050000	-105	2	25	105	35	58	60	69	41	90	55	2.3	
3710 60060000	-PHC32H -105	2	32	105	40	63	65	75	41	90	65	2.3	
3710 60070000	-135	2	32	135	47	63	65	75	41	120	65	3.1	L-4T
3710 60080000	WBT-AHO50 -PHC16H - 75	1	16	75	17	—	44	56	—	51	45	3.3	
3710 60090000	-105	1	16	105	27	—	44	56	—	80	45	3.7	
3710 60100000	-PHC20H - 75	1	20	75	17	—	50	60	—	56	50	3.4	L-5T
3710 60110000	-105	1	20	105	32	48	50	60	—	80	50	3.8	
3710 60120000	-PHC25H - 85	1	25	85	27	—	60	69	—	62	55	3.7	
3710 60130000	-105	1	25	105	35	58	60	69	—	80	55	4.1	L-6T
3710 60140000	-135	1	25	135	35	58	60	69	—	110	55	4.9	
3710 60150000	-PHC32H -105	1	32	105	47	63	65	75	—	78	65	4.2	
3710 60160000	-135	1	32	135	47	63	65	75	—	110	65	5.0	L-6T
3710 60170000	-PHC42H -105	1	42	105	46	78	80	90	—	84	73	4.6	
3710 60180000	-135	1	42	135	52	78	80	90	—	110	73	5.8	

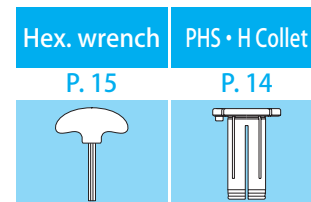
※ Available only in metric I.D.

For inch size I.D. and CAT dual contact, please contact NT USA

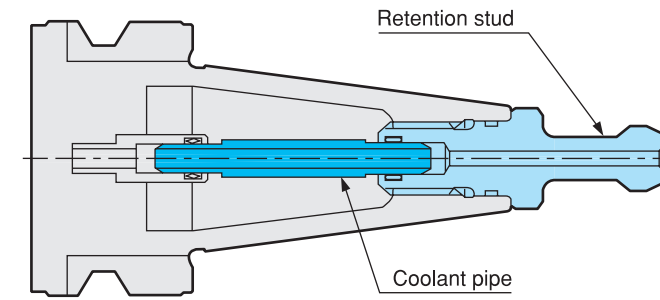
1. PHC20H and PHC32H have pin holes for collet with stopper pin on its body.
2. Tool shank diameter tolerance must be within h7.
A tolerance of h6 or 0/-0.01 is recommended when newly making a cutting tool.
3. Stopper bolts cannot be used.

Ordering Example

WBT-AHO50 - PHC16H- 75
 AHO Shank size I.D. Projection length

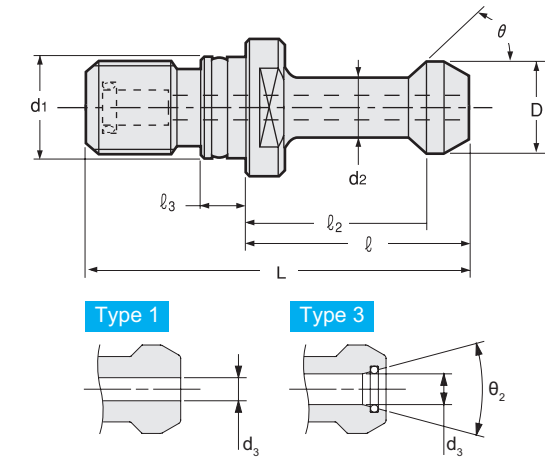


Drawing for AHO coolant through type



AHO holder requires a coolant pipe and a retention stud for center through coolant feed.

Retention stud

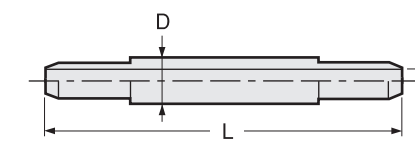


※ For retention studs other than MAS / JIS standard, please indicate the position of the sealing as illustrated in the above example.

Code	Model	Shank taper	Standard	D ₀ -0.1	d ₁ _{h7}	d ₂	L	ℓ	ℓ ₂	ℓ ₃	G	θ	Type	d ₃	θ ₂	—
3800 80000000	PSB-0-CH-AHO	30	MAS-1	11	12.5	7	43	23	18	5.5	M12	45°	1	2.5	—	6,000
3800 80000100	PSB-0A-CH-AHO	30	MAS-2	11	12.5	7	43	23	18	5.5	M12	60°	1	2.5	—	6,000
3800 80000030	PSB-30P-AHO	30	JIS	12	12.5	8	43	23.4	18.4	6	M12	75°	1	4	—	6,000
3800 80000401	PSB-1T-AHO	30	—	11	12.5	8	43	23	18	5.5	M12	45°	1	4	—	6,000
3800 80000026	PSB-26-CH-AHO	30	—	11	12.5	7.5	43	23	18	5.5	M12	60°	1	2.5	—	6,000
3800 80000003	PSB-3-CH-AHO	40	MAS-1	15	17	10	60	35	28	7	M16	45°	1	4	—	6,000
3800 80000031	PSB-31-CH-AHO	40	MAS-1	15	17	10	60	35	28	7	M16	45°	3	3	30°	6,000
3800 80000004	PSB-4-CH-AHO	40	MAS-2	15	17	10	60	35	28	7	M16	60°	1	4	—	6,000
3800 80000038	PSB-38-CH-AHO	40	MAS-2	15	17	10	60	35	28	7	M16	60°	3	3	30°	6,000
3800 80000040	PSB-40P-AHO	40	JIS	19	17	14	54	29	23	7	M16	75°	1	7	—	6,000
3800 80000032	PSB-32-CH-AHO	40	JIS	19	17	14	54	29	23	7	M16	75°	1	4	—	6,000
3800 80000023	PSB-23-CH-AHO	40	—	18.8	17	12.5	44.1	19.1	14	5	M16	45°	1	7	—	6,000
3800 80000025	PSB-25-CH-AHO	40	—	19	17	14	54	29	23	7	M16	75°	3	7	30°	6,000
3800 80000007	PSB-7-CH-AHO	50	MAS-1	23	25	17	85	45	35	10	M24	45°	1	6	—	6,000
3800 80000033	PSB-33-CH-AHO	50	MAS-1	23	25	17	85	45	35	10	M24	45°	3	6	30°	6,000
3800 80000035	PSB-35-CH-AHO	50	MAS-1	23	25	17	85	45	35	10	M24	45°	3	5.5	60°	6,000
3800 80000008	PSB-8-CH-AHO	50	MAS-2	23	25	17	85	45	35	10	M24	60°	1	6	—	6,000
3800 80000036	PSB-36-CH-AHO	50	MAS-2	23	25	17	85	45	35	10	M24	60°	3	5.5	60°	6,000
3800 80000039	PSB-39-CH-AHO	50	MAS-2	23	25	17	85	45	35	10	M24	60°	3	6	30°	6,000
3800 80000050	PSB-50P-AHO	50	JIS	28	25	21	74	34	25	10	M24	75°	1	10	—	6,000
3800 80000037	PSB-37-CH-AHO	50	JIS	28	25	21	74	34	25	10	M24	75°	3	5.5	60°	6,000
3800 80000017	PSB-17-CH-AHO	50	—	24	25	18	71	31	23	10	M24	90°	1	6	—	6,000
3800 80000019	PSB-19-CH-AHO	50	—	23	25	17	85	45	35	10	M24	90°	1	6	—	6,000
3800 80000024	PSB-24-CH-AHO	50	—	29	25	20.9	65.2	25.2	17.6	8	M24	45°	1	10	—	6,000
3800 80000027	PSB-27-CH-AHO	50	—	23	25	17	85	45	35	10	M24	90°	3	8	30°	6,000

A coolant pipe is included in a retention stud for AHO.

Coolant pipe



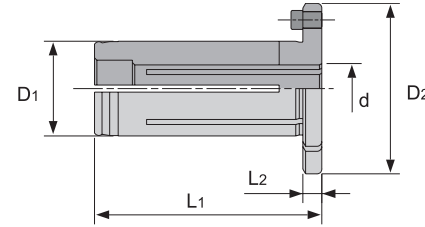
Code	Model	L	D	d	—
3800 60000030	CP-NBT30-OH	42	6	3	3,000
3800 60000040	CP-NBT40-OH	70	8	4	3,000
3800 60000050	CP-NBT50-OH	98	13	7	4,000

A coolant pipe is included with PSB-AHO.

Collet with stopper pin

For cutter with oil hole

For collet through coolant



Min. Clamping length	
Collet I.D. [d]	Min. Clamping length
6, 8 (0250, 0312)	29 (1.142 inch)
10, 12, 16, 20 (0375, 0500, 0625, 0750)	40 (1.575 inch)
25 (1000)	50 (1.969 inch)

The collet with stopper pin can be used with PHC20H, PHC32H, PHC0750H and PHC1250H.
Ordering Example

To hold φ6 cutting tool with BT40-PHC20H-75		To hold φ3/8 cutting tool using collet through coolant feed with CAT40-PHC0750H-85	
Chuck	Collet	Chuck	Collet
BT40-PHC20H-75	PHS20H-06-OH	CAT40-PHC0750H-85	PHS0750H-0375-C

METRIC-METRIC

For cutter with oil hole / Unit: Metric

Model	D1	D2	L1	L2	[d]
PHS 20H-[d]-OH	20 (0.787 inch)	41 (1.614 inch)	60 (2.362 inch)	4 (0.157 inch)	6,8,10,12,16
32H-[d]-OH	32 (1.260 inch)	55 92.165 inch)	72 (2.835 inch)	54(0.157 inch)	6,8,10,12,16,20,25

For collet through coolant / Unit: Metric

Model	D1	D2	L1	L2	[d]
PHS 20H-[d]-C	20 (0.787 inch)	41 (1.614 inch)	60 (2.362 inch)	4 (0.157 inch)	6,8,10,12,16
32H-[d]-C	32 (1.260 inch)	55 92.165 inch)	72 (2.835 inch)	54(0.157 inch)	6,8,10,12,16,20,25

METRIC-INCH

For cutter with oil hole / Unit: Metric

Model	D1	D2	L1	L2	[d]
PHS 20H-[d]-OH	20 (0.787 inch)	41 (1.614 inch)	60 (2.362 inch)	4 (0.157 inch)	0.250, 0.312, 0.375, 0.500, 0.625
32H-[d]-OH	32 (1.260 inch)	55 (2.165 inch)	72 (2.835 inch)	4 (0.157 inch)	0.250, 0.312, 0.375, 0.500, 0.625, 0.750, 1

For collet through coolant / Unit: Metric

Model	D1	D2	L1	L2	[d]
PHS 20H-[d]-C	20 (0.787 inch)	41 (1.614 inch)	60 (2.362 inch)	4 (0.157 inch)	0.250, 0.312, 0.375, 0.500, 0.625
32H-[d]-C	32 (1.260 inch)	55 (2.165 inch)	72 (2.835 inch)	4 (0.157 inch)	0.250, 0.312, 0.375, 0.500, 0.625, 0.750, 1

INCH-INCH

For cutter with oil hole / Unit: Inch

Model	D1	D2	L1	L2	[d]
PHS 0750H-[d]-OH	0.750 (19.05mm)	1.614 (41mm)	2.362 (60mm)	0.157 (4mm)	0.250, 0.312, 0.375, 0.500, 0.625
1250H-[d]-OH	1.250 (31.75mm)	2.165 (55mm)	2.835 (72mm)	0.157 (4mm)	0.250, 0.312, 0.375, 0.500, 0.625, 0.750, 1

For collet through coolant / Unit: Inch

Model	D1	D2	L1	L2	[d]
PHS 0750H-[d]-C	0.750 (19.05mm)	1.614 (41mm)	2.362 (60mm)	0.157 (4mm)	0.250, 0.312, 0.375, 0.500, 0.625
1250H-[d]-C	1.250 (31.75mm)	2.165 (55mm)	2.835 (72mm)	0.157 (4mm)	0.250, 0.312, 0.375, 0.500, 0.625, 0.750, 1

INCH-METRIC

For cutter with oil hole / Unit: Inch

Model	D1	D2	L1	L2	[d]
PHS 0750H-[d]-OH	0.787 (20mm)	1.614 (41mm)	2.362 (60mm)	0.157 (4mm)	6,8,10,12,16
1250H-[d]-OH	1.260 (32mm)	2.165 (55mm)	2.835 (72mm)	0.157 (4mm)	6,8,10,12,16,20,25

For collet through coolant / Unit: Inch

Model	D1	D2	L1	L2	[d]
PHS 0750H-[d]-C	0.787 (20mm)	1.614 (41mm)	2.362 (60mm)	0.157 (4mm)	6,8,10,12,16
1250H-[d]-C	1.260 (32mm)	2.165 (55mm)	2.835 (72mm)	0.157 (4mm)	6,8,10,12,16,20,25

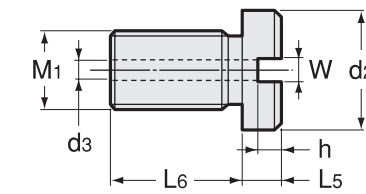
Inch to Metric (mm) → Inch × 25.4
 Metric (mm) to Inch → Metric ÷ 25.4 or Metric × 0.03937



Special / Custom Sizes on request

Stopper Bolt

Unit: Metric



For CAT, BT, UTS **BL**

Code	Model	M1 P=1.0	[L5]	L6	W	h	d2	d3	Available Chuck I.D. (Inches)		Available Chuck I.D. (Metric)	
									CAT & BT	UTS	CAT & BT	UTS
0711 040016 ※※	BL 16 - [L5]	10	5,15,25	14	5	3.5	15	4.5	0.625	0.625 ~ 1.500	16	16 ~ 42
0711 040020 ※※	BL 20 - [L5]	12	5,15,25	14	5	3.5	18	4.5	0.750, 1.000	-	20, 25	-
0711 040032 ※※	BL 32 - [L5]	18	10,20,35	17	5	5	25	4.5	1.250, 1.500	-	32, 42	-

Ordering Example

BL16 - 15
 Size [L5]

For HSK **HSK-BL**

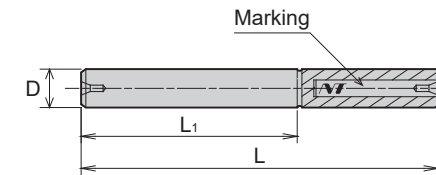
Code	Model	M1	[L5]	L6	W	h	d2	d3	Available Shank Size
5691 04006305	HSK63 -BL - 5	M8 P=1.25	5	5.5	5	3	15	4	HSK63A
5691 040063 ※※	HSK63 -BL - [L5]	M8 P=1.25	15, 25	7.5	5	3	15	4	HSK63A
5691 040100 ※※	HSK100 -BL - [L5]	M10 P=1.5	5, 15, 25	14	5	3.5	15	4.5	HSK100A

Ordering Example

HSK63 - BL - 15
 Shank Size [L5]

1. Choose right L5 dimension by checking minimum insertion length and shank I.D. depth.
2. Stopper bolts cannot be used with HSK63A-PHC32H-105 or HSK100A-PHC32H-110.

Torque Check Gauge



Code	Model	D	L	L1	Code	Model	D	L	L1
2584 70000016	TG-PHC16H	16	81	51	3935 00012000	TG-PHC0625H	0625	3.2	2.0
2584 70000020	TG-PHC20H	20	86	56	3935 00013000	TG-PHC0750H	0750	3.4	2.2
2584 70000025	TG-PHC25H	25	91	61	3935 00014000	TG-PHC1000H	1000	3.6	2.4
2584 70000032	TG-PHC32H	32	101	71	3935 00015000	TG-PHC1250H	1250	4.0	2.8
2584 70000042	TG-PHC42H	42	109	79	3935 00016000	TG-PHC1500H	1500	4.3	3.1

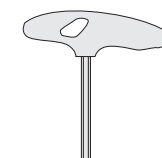
If the Torque check gauge can't be rotated with your fingers, there is no loss of gripping force.

Ordering Example

TG - PHC 03 - H
 I.D. size

1. Please perform the gripping force check at an ambient temperature of 20-25°C.
2. Use check torque gauge to test gripping force by hand. Please do not remove the torque gauge any other way.
3. When you clamp the torque check gauge, make sure the gauge is past the minimum insertion length.
4. This cannot be used for the HC type.
5. For use with custom products, please contact NT Tool.

Wrench



Model	Code
L-3T	6080 00000030
L-4T	6080 00115576
L-5T	6080 00115577
L-6T	6080 00115578

Ordering Example

L - 3T
 Size

Inch to Metric (mm) → Inch × 25.4
 Metric (mm) to Inch → Metric ÷ 25.4 or Metric × 0.03937



Special / Custom Sizes on request

FROM HEAVY MILLING TO TIGHT SPACE APPLICATIONS, NT TOOL HYDRAULIC CHUCKS COVER THEM ALL!!

PHC-A



PHS-Z



ST-PHC-SA



PHC-SA



PHC-SA-C



PHC-SA-NC



NT TOOL, the best protection against rust!



Special rust proof coating on entire surface including the tapered shank (BT, CAT, SK only).

Prevent seizure and scoring caused by metal abrasion against the machine spindle.

Special coating protects spindle from abnormal wearing.

Safe with water-soluble coolant.

Some holders are excluded.

- **Protect spindle from damage**
- **Longer cutting tool life**
- **Maintain good accuracy**

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