

HC / HCR / HCS



Operating instructions for hydraulic chucks

HC: conventional
HCR: reinforced
HCS: slim 3°

WWW.SECOTOOLS.COM

10145477, 60HCGB01
© SECO TOOLS AB, 2023.
All rights reserved. Technical specifications are subject to change without notice.



1. SAFETY INSTRUCTIONS

- This product can only be used within the given parameters. Technical specifications can be found in these operating instructions. The HC, HCR, and HCS hydraulic chucks are intended to clamp only rotation-symmetrical tools.
- The tool must be inserted at recommended minimum clamping length (see chart on next page). If the minimum clamping length is not followed, there will be a loss of accuracy, transmissible torque and the toolholder might be damaged.
- For longer overhangs, heavy tools, and use of extensions, adjust your cutting parameters accordingly. Balancing quality might be impacted.
- Do not remove the vent screw of the hydraulic chuck.
- The use of shank tools with recesses (eg. Weldon or Whistle Notch) influence the balancing grade and run-out accuracy.
- Never heat hydraulic chucks with Shrinkfit heating devices: high risk of burn and damage to chuck.
- Wear gloves to protect your hands.

2. CLAMPING/UNCLAMPING

- The tool shank tolerance must be of h6 or better.
- The tool shank must be free of burrs and/or dirt.
- Clean the hydraulic chuck's bore to remove dirt and grease, before inserting the tool shank.
- Insert the tool shank to its full length
- Holder should be locked in a vertical position in a Toolboy.
- The clamping screw must be tightened manually with an allen key to limit stop (tightening torque recommended: 10-12 Nm).
- Never tighten the clamping screw with a power screwdriver.
- To remove the tool, unlock the clamping screw until it becomes free. Beware: the clamping screw is not secured against dropping out.

3. LENGTH ADJUSTMENT

- The axial length adjustment must be done with an Allen key via the length adjustment screw. The total adjustment range is 10 mm.
- Slightly tighten the clamping screw for easy setting, but never adjust the length setting screw when the tool is completely clamped.

4. MAINTENANCE AND STORAGE

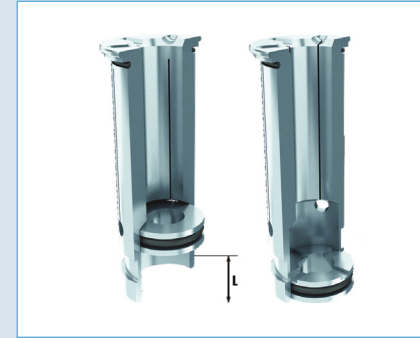
- The clamping bore and groove have to be cleaned after every tool change with a cleaning agent which contains solvents.
- Before storage, the hydraulic chuck must be slightly oiled.
- Always store the hydraulic chucks in unclamped position.
- Control the clamping force before the first use and every 100 tool changes or 3 months. For this purpose, a

- corresponding test shaft needs to be used (on demand). Verification should be done as follow:
- insert the test shaft fully into the hydraulic chuck's bore.
 - Turn the clamping screw to limit stop (tightening torque recommended 10-12 Nm).
 - If the test shaft can be easily removed from the chuck by hand, the clamping force is insufficient. Contact your local Seco representative for servicing
 - In case of intensive usage, regular lubrication of the clamping screw is recommended, using copper paste (eg Molykote CU74339).

5. SLOTTED REDUCTION SLEEVES

- Clean the sleeve and the tool shank.
- Insert the tool into the sleeve until stop against the adjusting ring.
- Preset the required tool length by sliding up and down the adjustable

- ring. Take care that the ring remains in a straight position.
- Insert the sleeve with tool into chuck's bore until face contact. Be sure the chuck is in unclamped position.
 - Bring the axial stop screw into contact with the adjustable ring.
 - Proceed with clamping as stated in chapter 2.

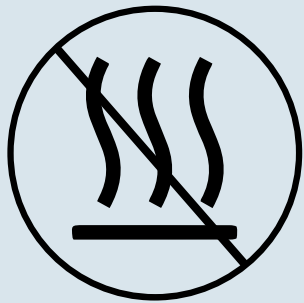
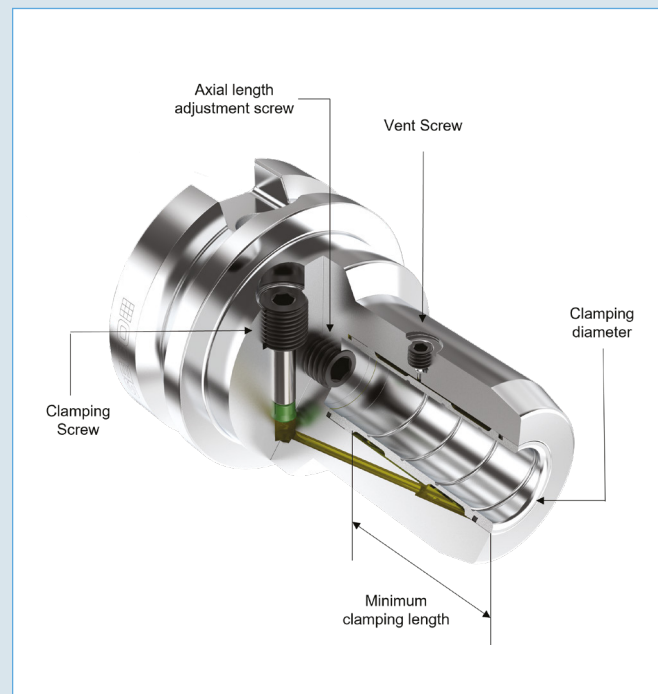


6. USABLE TOOL SHANKS

Shank Type tol. h6	Cylindrical DIN1835-1A DIN6535 HA	Weldon 1 flat DIN1835-1B DIN6535 HB	Weldon 2 flats DIN1835-1B DIN6535 HB	Whistle & Notch DIN1835-1E DIN6535 HE
Standard type HC and Power type HCR design in HSK-A, DIN, BT, BT T/F, CAT				
Direct clamping	Ø 6-32 mm Ø 0.236-1.260"	Ø 6-20 mm Ø 0.236-0.787"	Ø 25-32 mm Ø 0.984-1.260"	Ø 6-32 mm Ø 0.236-1.260"
Standard type HC design in Seco-Capto, CAT T/F, and Slim 3° design type HCS				
Direct clamping	Ø 6-32 mm Ø 0.236-1.260"	Ø 6-32 mm Ø 0.236-1.260"	NO	NO
With reduction sleeve	Ø 3-25mm Ø 0.118-0.984"	Ø 6-20 mm Ø 0.236-0.787"	Ø 25mm Ø 0.984"	Ø 6-25 mm Ø 0.236-0.984"

Clamping Ø		Max rpm/min				Minimum clamping depth			
		Standard design HC		Power design HCR	Slim design 3° HCS				
		HSK-A, DIN, BT, BT T/F, CAT	Seco-Capto, Graflex, CAT T/F	All	All	HSK-A, DIN, BT, BT T/F, CAT, Seco-Capto, Graflex		CAT-T/F, All slim HCS 3°	
6	0.236"	50,000	40,000		40,000	27 mm	1.063"	27 mm	1.063"
8	0.315"	50,000	40,000		40,000	27 mm	1.063"	27 mm	1.063"
10	0.394"	50,000	40,000		40,000	31 mm	1.220"	32 mm	1.260"
12	0.472"	50,000	40,000	50,000	40,000	36 mm	1.417"	37 mm	1.457"
14	0.551"	50,000	40,000		40,000	36 mm	1.417"	37 mm	1.457"
16	0.630"	50,000	40,000		40,000	39 mm	1.535"	42 mm	1.654"
20	0.787"	50,000	40,000	50,000	40,000	41 mm	1.614"	42 mm	1.654"
25	0.984"	25,000	25,000		25,000	47 mm	1.850"	48 mm	1.890"
32	1.260"	25,000	25,000	25,000	25,000	51 mm	2.008"	55 mm	2.165"

- Operating temperature: 20-50°C/68-122°F
- Max. coolant pressure: 80 bar/1160,30 psi, Seco-Capto and Graflex: 50 bar/725.18 psi
- Adjustment range of the tool function length: 10 mm/0,3937"
- Tool shank diameter tolerance: h6 or better
- Adjust your parameters in case of long tools, heavy tools, and when using extensions



Hydraulic chucks are not Shrinkfit holders :
Do not heat them ! Risk of injuries !