

# SHRINKING TECHNOLOGY

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➔ TSI 3510

## ➔ CONTACT

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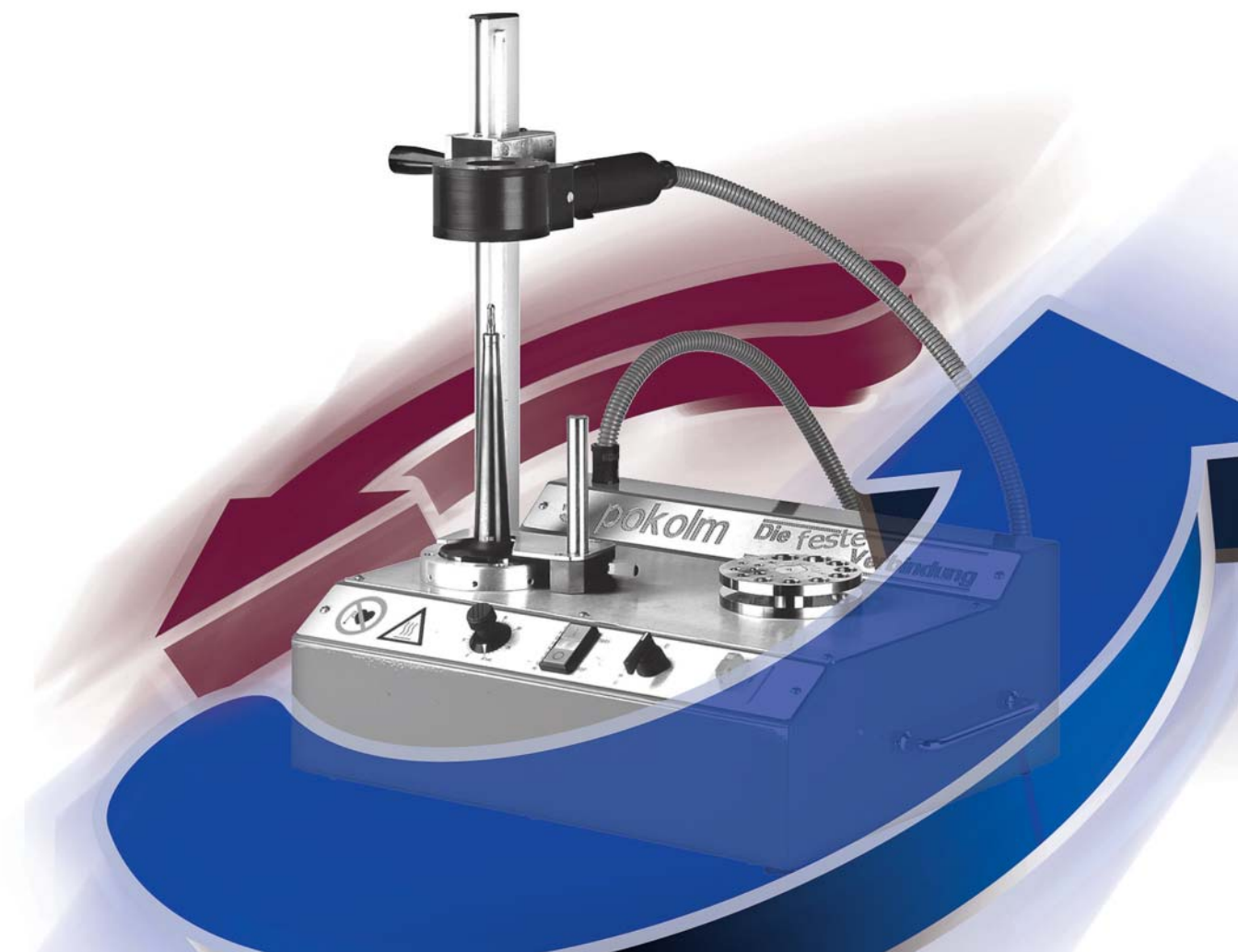
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# INDUCTIVE SHRINKING TECHNOLOGY

## FIRST OPERATION: SHRINKING, THEN MILLING

**S**hrinking Technology convinces everybody compared with conventional chucking methods from the past. What counts? Absolute concentricity and highest precision.

This guarantees much longer tool life. Shrinking Technology secures also a safe load transmission and an extremely high torque- and balance quality. Its capability for extended revolutions is the best assumption for getting optimum surface quality in order to save expensive finish processes.

Compared with usual Milling Chucks, Shrinking Arbors allow distinctly slim adaptors and extend the variety of applications, which would be impossible without this most modern process.

For applications with extended requirements, POKOLM has developed a complete new Adaptor-System: DuoPlug® a combination of screwing and shrinking. This unique and patent protected technology secures absolute concentricity and rigidity – also with long reach adaptors and roughing with High Speed Technology.

Pokolm-Voha offers for Shrinking Technology a highly qualified range:

- ⊖ a top-class Induction Shrinking Unit
- ⊖ Shrinking arbors for all possible machine connections
- ⊖ our Milling Cutter Bodies DuoPlug®
- ⊖ our Solid Carbide Adaptors DuoPlug®
- ⊖ our “zero-reach” Shrinking Arbors

(additional information about the POKOLM DuoPlug® System can be found under chapter “Milling Cutter Bodies” of our catalogue.)



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# INDUCTION SHRINKING UNIT TSI 3510

## FAST SHRINKING PROCESSES FOR SOLID CARBIDE TOOLS IN ADEQUATE TOOL HOLDERS



- ⊕ maximum safety
- ⊕ concentricity up to 0.003 mm
- ⊕ safe load transmission
- ⊕ extremely high torque
- ⊕ high balance quality

The latest POKOLM Induction Shrinking Unit TSI 3510 offers to all users a most modern unit with an output of 3,5 KW and offers a large range of advantages too. Most important: rapidly reduced time consumption for all shrinking processes. This helps to reduce your set-up times and costs to an absolute minimum. Through this Inductive Technology, the arbor is quickly treated by uniformly distributed heat.

Tools and Shrinking Unit stay cool. This guarantees a maximum of precision and safety. A removable hand-operating unit allows shrink-grip and shrinking-release processes

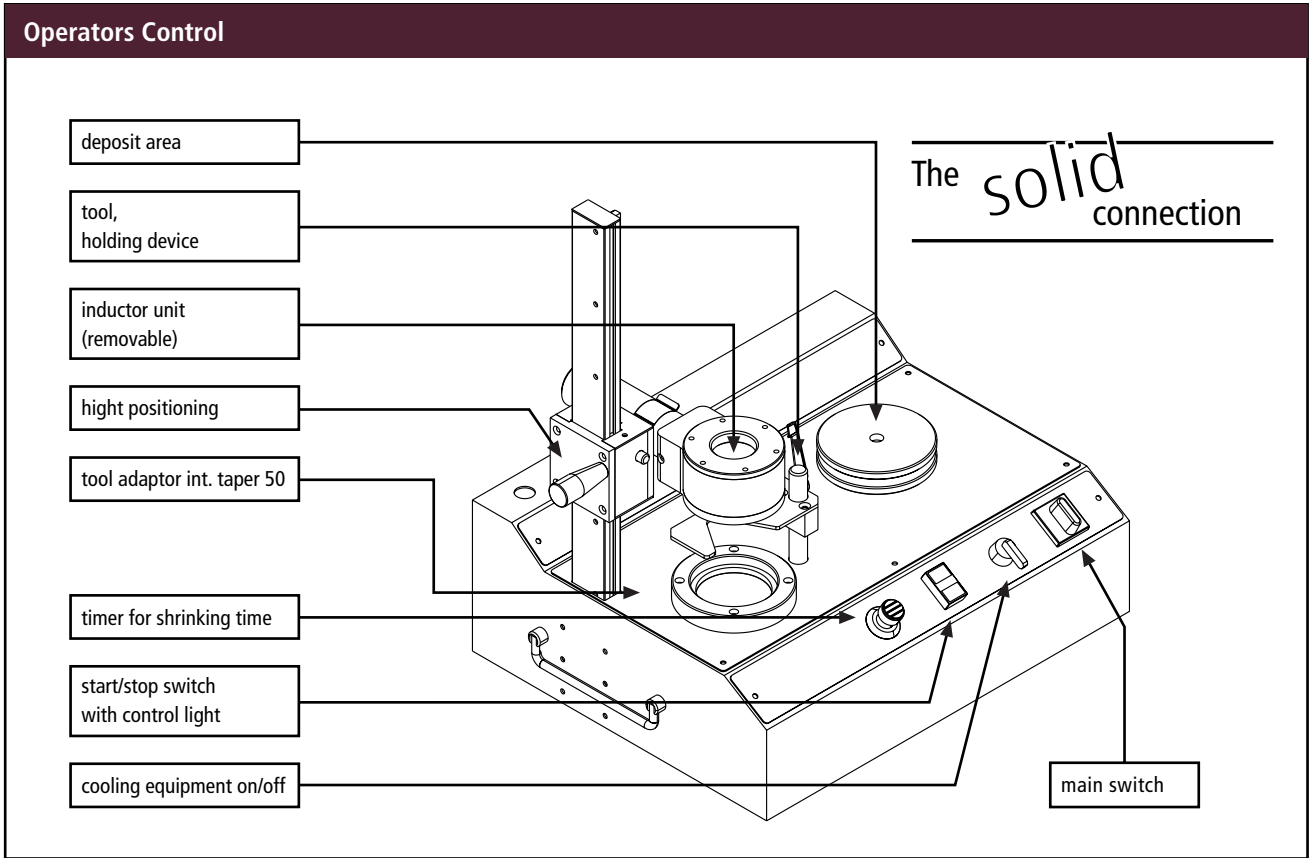
outside the unit on your machining centre or in vices, reducing even more set-up times.

The unit needs no time for setting-up or maintenance. Simple and ergonomic handling, integrated cooling equipment and sufficient efficiency are further important highlights, influencing your decision for future-oriented investments.

Our latest DuoPlug® Arbor and Milling Head System is easily handled by removable Shrinking Head outside the unit.



# TECHNICAL DATA



Technical Data	
designation	TSI 3510
output	3.5 KW
main voltage	230 V, 50 / 60 Hz, 16 A
system of protection	IP 40
max. arbor diameter	45 mm
max. heating zone	40 mm
max. operation time	30 sec
pre-adjustment timer	
time	0 - 30
unit	seconds
mode	C
dimensions	l 555, w 450, h 200 mm
weight	35 kilos

Accessories

The cooling box enables you to use the unit during cooling process without losing time

Set of reduction- and operation equipment: reductions from SK/BT 50/ HSK 100 to SK 40, HSK 32, 40, 50 + 63. ER20-connection rings with cylindrical bores: 12, 14, 16, 20 + 25 mm, pliers and hex wrenches, distance rings for adjusting shrink-lengths 6, 8, 10, 12, 14, 16 20 + 25 mm diam.

SUITABLE ARBOR CONNECTIONS

FOR SHRINKING PURPOSES

⊖ for shrinking shank diameters of 3 up to 36 mm Ø

**P**OKOLM-Shrinking Arbors are suitable for all existing machine connections. The offered variety of reach-lengths secures optimum rigidity also under extremely difficult cutting conditions.

**HSC** POKOLM-Shrinking Arbor Systems are produced with maximum accuracy, exact concentricity and are inspected under adequate conditions.



with international taper shanks	with hollow taper shanks	with morse taper shanks	with short taper system
sizes:	sizes:	sizes:	sizes:
SK 40	HSK 32      HSK 80	MTS 2	KK 3
SK 50	HSK 40      HSK 100	MTS 3	KK 4
	HSK 50	MTS 4	KK 5
	HSK 63	MTS 5	
style:	style:	style:	style:
DIN 2080	DIN 69893	DIN 228 B	works standard
DIN 69871 A			
MAS BT	forms:		
	A, C, EC, E, F		


Please find detailed information about Pokolm-Arbors and Adaptors in our current main catalogue, chapter "Arbors and Adaptors".

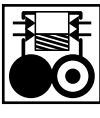
POKOLM DuoPlug® - THE COMBINATION CLAMPING SYSTEM

DuoPlug® SCREW FIRST, THEN SHRINK!

⊖ threads between M 5 and M 16

**W**orld wide unique and patent protected: revolutionary gripping system: a combination of screwing and shrinking! For maximum accuracy, exact concentricity, extreme rigidity, especially with long reach and high-speed milling processes!

 DuoPlug®-Solid Carbide Adaptors convince everybody: it ensures safe milling operations – even at unattended machining.

 POKOLM DuoPlug® System offers absolute backlash-free connections. High performance roughing operations with safe load transmission.



Shank diameters d <sub>2</sub> mm:			
Ø 12 mm	Ø 16 mm	Ø 20 mm	Ø 25 mm
reach mm:	reach mm:	reach mm:	reach mm:
20 up to 40	25 up to 150	25 up to 150	25 up to 175
thread mm:	thread mm:	thread mm:	thread mm:
M 5, M 7	M 5, M 7, M 10	M 12	M 16

Please find detailed information about Pokolm-Arbors and Adaptors in our current main catalogue, chapter "Arbors and Adaptors".