

**Shrink-fit work station  
SHRINK-MASTER**



Type		HL-1	HL-1	
Shrinking diameter (Tool shank)	inch	up to 3/4	up to 1 1/4	
	mm	up to 20	up to 32	
Page		348	348	

**SHRINK-MASTER  
Accessories**

Adapter flanges



349

Air guide adapters



349

Quick cooling adapters



349

Cover discs



349

**SHRINK-MASTER  
Accessories**

Cover



349

Protective wire netting



349

Filter mats for inductor coil



349

Storage tray



349

**SHRINK-MASTER  
Accessories**

Hand-held shrinking unit



350

Digital length measuring device



350

**SHRINK-MASTER  
Accessories**

Fine height adjustment



351

Length adjustment sleeves



351

Page

**Cold-air nozzle**



352

Page

**Cold-air nozzle  
Accessories**

Spare hose



353

Fixture complete



353

Magnetic shoe



353

Socket



353

Page

The induction shrink-fit work station SHRINK-MASTER permits the quick shrinking and un-shrinking of solid carbide and HSS tools in specially designed clamping chucks. In comparison with conventional clamping techniques, tools clamped in a shrink-fit clamping chuck can transmit 2 to 4 times higher torques.

The excellent concentricity of clamping chuck and tool guarantees long tool life and extremely narrow tolerances.

The SHRINK-MASTER is easy to operate, and needs only a 3-phase power supply.

**Performance features:**

- Quick and even heating of the clamping chucks
- Rotating dial for simultaneous work on up to 4 clamping chucks (while one chuck is being heated, other chucks can cool down)
- Universally applicable for different clamping chucks up to ISO taper 50 / HSK 100
- Simple and ergonomic handling
- Similar shrinking times for all diameters
- Up to a diameter of 1.8 in (46 mm), resp. 2.2 in (56 mm), on the side of the clamping chuck, no coil change is necessary
- Only a 3-phase power supply is necessary
- Free space for longer tools
- Suitable for all tools with a straight shank and a shank tolerance h6
- Shrinking and un-shrinking of HSS tools possible in connection with standard commercially available induction shrink-fit chucks and special cover discs (1 set is included with each SHRINK-MASTER work station)



EDP Tool Identification	6929.001	6929.002
Voltage of 3-phase power supply	3 x 400 - 480V + PE 50/60Hz	3 x 400 - 480V + PE 50/60Hz
Nominal power	10kW	10kW
Nominal current	14.5A	14.5A
Shrinking dia. (tool shank)	up to 3/4 in (20 mm)	up to 1 1/4 in (32 mm)
Max. tool length (clearance above dial)	15.75 in (400 mm)	15.75 in (400 mm)
Max. taper length (clearance beneath dial)	5.1 in (130 mm)	5.1 in (130 mm)
Inner coil diameter	1.9 in (48 mm)	2.35 in (60 mm)
Max. chuck diameter	1.8 in (46 mm)	2.2 in (56 mm)
max. chuck heating length	2 in (50 mm)	2 in (50 mm)
Shrinking time	approx. 4 - 12 s	approx. 4 - 12 s
Un-shrinking time	approx. 4 - 16 s	approx. 4 - 16 s
Dimensions H x W x D	33.5 x 25.6 x 20.9 in (85 x 65 x 53 cm)	33.5 x 25.6 x 20.9 in (85 x 65 x 53 cm)
Weight	103.4 lbs (47 kg)	103.4 lbs (47 kg)
Permissible room temperature	41 - 95 °F (5 - 35 °C)	41 - 95 °F (5 - 35 °C)

**Adapter flanges for shrink-fit chucks**

EDP tool identification		6925
For tool shanks	EDP Size ID	
ISO20/25	51	●
HSK32/40	52	●
HSK50, ISO30/40, CAT40	53	●
HSK63, BT40	54	●
HSK80	55	●
HSK100	56	●
ISO50, CAT50	57	●
BT50	58	●
ES-EX25/32	59	●



**Air guide adapters for cool air**

EDP tool identification		6925
For tool shanks	EDP Size ID	
ISO20/25/30/40	62	●
HSK32/40/50/63		
CAT40,BT40		
HSK80/100	63	●
ISO50, CAT50		
BT50		



**Quick cooling adapters**

EDP tool identification		6925
Tool shank diameter	EDP Size ID	
1/4 - 3/8 in (6 - 10 mm)	053	●
3/8 - 5/8 in (12 - 16 mm)	054	●
5/8 - 1 in (18 - 25 mm)	058	●



For reducing cooling time to 3-4 minutes

**Cover discs for coil unit**

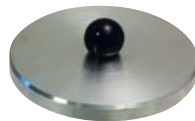
EDP tool identification		6929
For shank diameters	EDP Size ID	
For Cat. No. 6929.001:		
1/4 - 3/8 in (6 - 10 mm)	481	●
1/2 - 5/8 in (12 - 16 mm)	482	●
5/8 - 3/4 in (18 - 20 mm)	483	●
For Cat. No. 6929.002:		
1/4 - 3/8 in (6 - 10 mm)	601	●
1/2 - 5/8 in (12 - 16 mm)	602	●
5/8 - 3/4 in (18 - 20 mm)	603	●
1 - 1 1/4 in (25 - 32 mm)	604	●



- For shrinking and un-shrinking HSS tools
- 1 set is included in the delivery

**Cover**

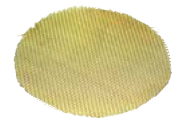
EDP tool identification		6925
Diameter	EDP Size ID	
4.725 in (120 mm)	94	●



For covering non-operative work stations of the rotating dial, in order to shorten the cooling time for hot shrink-fit chucks

**Protective wire netting (set of 4)**

EDP tool identification		6929
Mesh size	EDP Size ID	
.04 in (1 mm)	501	●



For keeping small objects or tools from falling through the air guide tubes and blocking the dial fan

**Storage tray for 5 tools**

EDP tool identification		6925
Length x Width	EDP Size ID	
9.7 x 3.2 inch (245 x 80 mm)	93	●



**Filter mats for inductor coil**

EDP tool identification		6925
No. of pieces	EDP Size ID	
5 pieces	90	●



**Shrink-Fit & Access.**

**Hand-held shrinking unit (complete with 10 ft (3 m) power cable and plug)**

EDP tool identification		<b>6929</b>
Tool shank diameter	EDP Size ID	
1/4 - 3/4 inch (6 - 20 mm)	<b>81</b>	•
1/4 - 1 1/4 inch (6 - 32 mm)	<b>82</b>	•

For shrinking tool shanks up to 3/4 in (20 mm), with an inner coil dia. of 1.9 in (48 mm),  
For shrinking tool shanks up to 1 in (32 mm), with an inner coil dia. of 2.35 in (60 mm)



**Digital length measuring device (complete with accessories)**

EDP tool identification		<b>6925</b>
	EDP Size ID	
	<b>80</b>	•



- Measuring rod 23.6 in (600 mm)
- Measuring precision .008 in (0.2 mm)
- Digital display .001 (.01 for mm sizes)
- Reset switch
- Serial interface SP 232 C
- Without connecting cable

**Later installation is possible**

**Fine height adjustment for digital length measuring device (including serrated guide pillar)**

EDP tool identification		6925
	EDP Size ID	
	805	●



**Length adjustment sleeves**

EDP tool identification		6925
Shank diameter (only metric)	EDP Size ID	
6 mm	7506	●
8 mm	7508	●
10 mm	7510	●
12 mm	7512	●
16 mm	7516	●
20 mm	7520	●

For adjusting the projection length of tools in the shrinking process





EDP tool identification		<b>6910</b>
	EDP Size ID	
	15	•

**Delivery:**

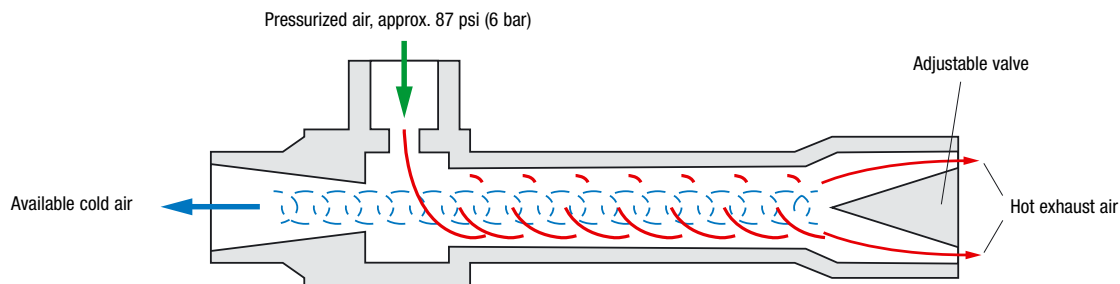
- Length (without hose) 8.86 in (225 mm), weight: 1.54 lbs (0.7 kg)
- With flexible hose, length approx. 11.8 in (300 mm), for cold air
- Muffler (SN14) for hot exhaust air
- Ball-valve with fitting (1/4") for inlet hose (6 mm) with quick-change attachment (7.2 mm)

**Application range:**

Removing the chips with pressurized air is a very economical alternative to the use of coolant/lubricant: it helps to avoid the shortening of tool life due to thermal shock on one hand, and the expensive preparation and disposal of coolant/lubricants on the other hand. The very light chips produced by modern milling processes can be easily removed even from very deep molds. Using cold air seems to increase tool life considerably in most cases, however, experience is still too small to allow an exact quantification.

**Function:**

The function of the cold-air nozzle is based on the principle of the vortex tube, in which two rotating and counterflowing air streams are generated (without moving components). The inner air stream exits from one end of the tube with temperatures down to -40 °F (-40 °C) and can be used for cooling purposes, the outer air stream comes from the other end with temperatures up to +212 °F (+100 °C) as hot exhaust air. A needle valve on the exhaust air outlet makes it possible to set the stream volume and the cold-air percentage. We strongly recommend using a standard maintenance unit, e.g. pressure reducing valve, filter and water separator.



**Temperature, measured on the effective exit of the vortex tube (not the end of the nozzle!)**

Fresh-air pressure psi (bar)	Temperature of cold air in °F (°C), with a cold air amount of		
	25%	50%	75%
43.5 (3)	-24 (-31)	- 8 (-22)	21 (- 6)
58 (4)	-31 (-35)	-13 (-35)	18 (- 8)
72.5 (5)	-38 (-39)	-18 (-28)	14 (-10)
87 (6)	-44 (-42)	-24 (-31)	12 (-11)
101.5 (7)	-51 (-46)	-29 (-34)	9 (-13)

**Air consumption, with an incoming air temperature of 70 °F (21 °C)**

Input pressure psi (bar)	Air consumption	Capacity
100 (6.9)	0.25 ft³/sec (7.08 l/s) ≅ 900ft³/h (25.5 m³/h)	226 kcal/h ≅ 263 W

**Spare hose**

EDP tool identification		<b>6910</b>
Length	EDP Size ID	
approx. 11.8 in (≈ 300 mm)	<b>20</b>	●



**Fixture complete**

EDP tool identification		<b>6910</b>
Weight	EDP Size ID	
0.9 lbs (0.4 kg)	<b>25</b>	●



**Magnetic shoe**

EDP tool identification		<b>6910</b>
Diameter	EDP Size ID	
3.15 in (80 mm)	<b>26</b>	●



**Socket**

EDP tool identification		<b>6910</b>
Height	EDP Size ID	
approx. 3 in (≈ 75 mm)	<b>27</b>	●

