

Plugs

INFO-Products

EXPANDER

INFO Anchorage Principle

INFO Installation Lengts High Pressure Systems

INFO Installation Lengts Low Pressure Systems



Dichtstopfen LP

LP 900

Werkstoff: Automatenstahl|Nitrocarburiert, geölt

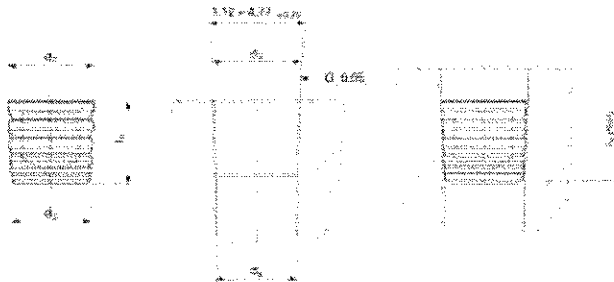
Sealing Plugs LP

INFO Pressure Performance

INFO Installation Instruction

LP 900

Material: Free Cutting Steel|Nitrocarburized, lubricated



d ₁ Expander Ø	d ₂	l ₁	d ₃ min.	d ₄ + 0,1 - 0,3	l ₂ min.	Type	+ IP	
4,40	3,7	5,0	4,55	4,0	7,0	LP 900-040	1000	10000
6,40	5,7	6,0	6,55	6,0	8,5	LP 900-060	500	2500
7,40	6,7	6,0	7,55	7,0	8,5	LP 900-070	500	2500
8,45	7,7	7,0	8,6	8,0	9,5	LP 900-080	250	2000
9,60	9,0	7,5	9,75	9,0	10,0	LP 900-090	100	1000
10,65	10,0	8,5	10,8	10,0	11,0	LP 900-100	100	1000
12,75	12,0	9,5	12,9	12,0	12,0	LP 900-120	50	500

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KOENIG expander[®]



Pressure Performance

Series LP	Base material of the Installation						
	① F16-100	② C15Pb	③ EN-GJL-250	④ EN-GJS-500-7	⑤ AlCuMg2	⑥ AlMgSiPb	⑦ G-AlSi7Mg
ø 4-12	180 bar / 2'600 psi 60 bar / 850 psi					180 bar / 2'600 psi 60 bar / 850 psi	
H ₀₆	Tolerance	as per specification sheet					
	Roughness	R _a 10-30µm			Anchorage in base metal		

①②③④⑤ Temperature range for Proof Pressure Test ⑥: -40 °C bis +150 °C
 ⑥⑦ Temperature range for Proof Pressure Test ⑥: -40 °C bis +100 °C

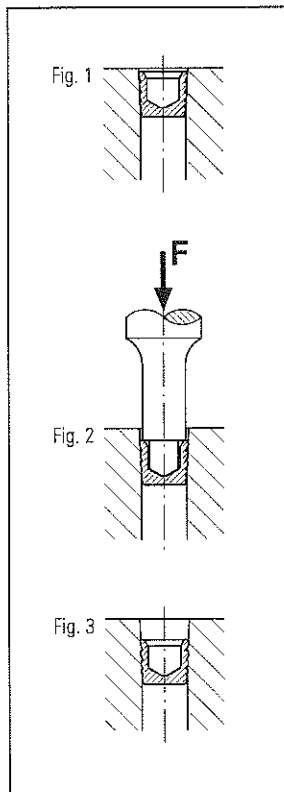
Proof Pressure Test ⑥

Max. allowable Working Pressure = Nominal Pressure

Installation Instruction LP Series

Drilled Hole

- The drilled hole must be within the tolerances shown on the dimensional sheets.
- The cone rate 1:12 must be kept as per specification sheet.
- Holes must be round within 0.05 mm.
- With hard materials the bore roughness should be from $R_z = 10\text{--}30\ \mu\text{m}$ for best results.
- Longitudinal rifles and spiral grooves should be avoided. These influence the sealing effectiveness.
- The bore must be free of oil, grease and chips.



Setting Procedure

- With the setting hole facing out, the LP-plug is inserted in the cone bore. The top sleeve should not be above the surface of the base material (Fig. 1).
- The LP-plug can now be pressed in with the setting tool. Corresponding approximate values for stroke S are from the table below (Fig. 2).
- Installed LP-plug (Fig. 3).

Note:

- Use the proper size setting tool for the KOENIG-Expander according to the data sheet.
- Through washing of the LP-plugs before installation, higher setting force might occur.

Press

- It is preferred to limit travel when using a press because insertion force is difficult to control.
 - Recommended setting speed is 5 mm/sec.
- The KOENIG-Expander assuring an optimum orientation, it works perfectly with automatic processing.

Plug Removal

With KOENIG-Expander LP Series plug removal is possible. The plug can be drilled out with a high speed steel drill.

Procedure:

1. Drill out, in one process, to the next larger diameter, nominal diameter d_4 according to the data sheet.
2. Drill the taper hole with a reamer up to diameter d_3 according to the data sheet.
3. Clear chips, remnants of the sleeve, and oil and grease from the bore.
4. Install a new KOENIG-Expander.

Note: After plug removal always install the next larger size plug.

Installation Chart

Series LP 900 –	040	050	060	070	080	090	100	120	
S [mm] ± 0.25	Stroke (average value)	1.0	1.3	1.3	1.5	1.8	1.8	2.0	2.0
in steel, grey cast nodulized cast iron in aluminium wrought alloy, aluminium-cast material									

