

**HAELOK**®



**HAND  
BOOK**

**OUR INVENTION.  
THE ORIGINAL.**



## WELCOME

We hope that this guide will give you a great introduction to the world of HAELOK AG connections. It provides you with basic knowledge. Please contact us if you have any specific queries or questions that have not been answered after reading this document. We at HAELOK® will be happy to help you.

We would be grateful for any suggestions and ideas for improving this manual. Share your success with us on our social media channels and under the hashtag #haelok.

Dipl.-Ing. Bernhard Sauter,  
CEO HAELOK AG



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## INTRODUCTION

The HAELOK® system is a well-rounded overall package consisting of various types of fittings in almost all sizes, the corresponding press tools and accessories.

The system currently consists of two different steels: galvanised steel 1.0570 (called “CC”) and stainless steel 1.4404 (called “XX”). The material selected for the fitting should correspond to that of the pipes used.

Furthermore, the company has its own “THERMO” product line. This line is optimised for the pipes and applications used in district heating.

All fittings are based on the same system, whereby a conical press ring on the inside is pushed axially onto the base body, causing it to taper and create a tight connection to the pipe with two to three metal press lips. This taper is forced. If the press ring is completely displaced, a pipe compression and thus a connection will inevitably take place. The parts are pre-assembled in one piece. The sensitive sliding surface is therefore well protected and no components can be mixed up.

Without polymer seals, this connection is reliably tight over the long term for pressures from vacuum up to 600 bar and withstands vibrations, temperature fluctuations and pressure changes.

A pressed connection cannot be opened again. You can be sure that no manipulation of your system can be carried out later.

Fast. Clean. Safe.

## PREPARATION

As with welding, your installation must also be correctly designed in terms of statics and pressure technology when pressing. The weight of the fittings must also be included in the calculations. The maximum loads of your system must be adapted to the product (e.g. tension-compression loads, etc.)

Information on the performance data of the connection can be found in the HAELOK® catalogue and in the product data sheets. These also depend on the pipe used and can therefore vary. In case of doubt, please contact HAELOK AG or the distributor.

Pipe static planning is required to ensure that the tension and compression forces caused by pressure and temperature changes do not lead to material flow in either the pipes or the fitting, i.e. that they remain below the yield point.

It may prove advantageous to align the complete installation on site and, if everything fits correctly, to start pressing. Or you can build the classic way.

Although the system is simple and the pressing process only takes a few seconds, you should take the time to carry out all the necessary installation steps.





## WORKPLACE

The workplace should always be organised neatly and clearly. This reliably prevents damage or even accidents and allows you to move forward quickly and safely.

In dirty environments, the fittings should be stored dry and clean, preferably in their own packaging. Tools must not be placed in the excavation pit. Plastic trays or alternatively our tool cases have proven their worth here. A wet environment does not affect the quality of the pressing, but does pose a risk to the tool. The tool must not be used under water. After use, the tool must be cleaned, dried and re-greased. (see page 21)

All applicable safety measures must also be complied with. This includes the specifications of the HAELOK® system as well as the specifications of your company and legal requirements.



**THERMO**



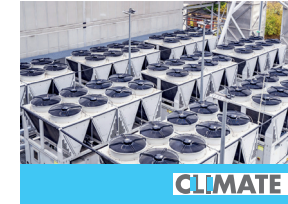
**TECH**



**PROTECT**



**ENERGY**



**CLIMATE**



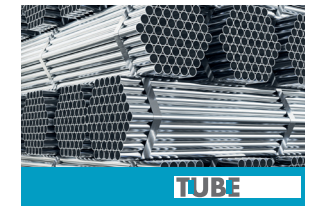
**TRANS**

## FIELD OF APPLICATION

Common fields of application are district heating, hydraulics, high-pressure extinguishing systems, cooling systems with CO<sub>2</sub>, ammonia (NH<sub>3</sub>), hydrogen and various process media. Applications with inert gases and much more. HAELOK® connectors cause only minimal cross-sectional taper and can therefore be pigged.

Pipes that were previously welded can be pressed cleanly and quickly with the HAELOK® system.

The HAELOK® connection does not guarantee the absence of dead space, which must be taken into account when using different media.



**TUBE**

## PRESSURE

HAELOK® connections can be used in the pressure range from a vacuum of 170 mbar to a maximum of 1137 bar. The maximum pressure depends on the fitting size, the type, the pipes used, the application, the temperature range and the safety factor.

This information can be found in the catalogue and in the product data sheets.

Example		
HLK-10SF-60-CC	Bursting pressure: 600 bar	(see table on page 29)
Pipe 60,3 x 2,9 mm	Permissible pipe	(see table on page 32)
Safety factor	2	
Operating temperature	150 °C	(see table on page 29)
⇒ 600 bar / 2 = 300 bar	21% of 300 bar = 63 bar (deduction)	⇒ <b>PN = 237 bar</b>

Pressure pulses and impacts must be included in the calculation. Classic example: condensed water in a pipe is suddenly heated and expanded by new vapour.

The permissible working pressures specified in the catalogue apply without restriction in the temperature range from -20 °C to 50 °C.

## TEMPERATURE

HAELOK® fittings can be used from -196 °C to 400 °C

Stainless steel (XX)	from -196 °C	to 400 °C
Steel (CC)	from -20 °C	to 350 °C
Special steel (355NL)	from -50 °C	to 350 °C

Pressing must be carried out between -10 °C and 40 °C.

## HUMIDITY

It can be pressed directly onto damp or wet pipes. However, the general requirements for the surface must be met. A pipe still containing media can also be pressed.

## CORROSION

To avoid corrosion, make sure that the pipe and fitting are made of equivalent material. (CC fitting on steel pipe; XX fitting on stainless steel pipe)

We were also involved in corrosion resistance tests. The results confirmed that the pipe connected corrodes first before the HAELOK® fitting malfunctions.

HAELOK® can provide a separate report from an accredited institute on request, which deals with the subject of corrosion in more detail. General, contact, pitting, crevice, microbiological and stress corrosion cracking are treated.

## SPECIAL APPLICATION FEATURES

- In the case of underground pipelines in district heating, particular attention must be paid to the yield strengths.
- Stainless steel fittings must be used in conjunction with ammonia (NH<sub>3</sub>), as a chemical reaction may occur with the galvanisation.
- If possible, loads should be avoided after pressing. For example, it is forbidden to press the pipes next to the trench and then lower them using lifting gear.
- If pressure tests are carried out with water, the system must then be left filled. Otherwise it must be dried completely. Partial draining can lead to corrosion damage.

## APPROVALS

HAELOK® connectors comply with numerous approvals and regulations, such as IACS/ASME or PED. They are also already being used successfully in areas without regulations or approval requirements.

You can find an overview in the catalogue or on our website. Detailed information is available on request.

## PIPES

The quality of the connection depends on the pipes used and their properties. The main focus here must be on the surface in the pressing area. The pipe should be free of dirt (e.g. sand), deep notches, number punches, bulgings, adhesions, deep rust and crushing.

The quality in terms of roundness and wall thickness must meet the specifications.

### Tolerance range:

Out-of-round and oversized pipes present no danger as they do not fit into the fitting at all. Undersized pipes are not allowed. The details can be found from page 28 onwards.

The wall thickness must be adapted to the application and must comply with the permitted range. See page 28.

The pipes used must meet the standards approved by us. For example, the THERMO line conforms to EN 10216-1/EN 10217-1 and AGFW FW401, etc.

The better the surface quality selected, the less work there is to prepare for installation.

Detailed information with sample images can be found from page 24 onwards.

## ARTICLE AND BATCH NUMBERS

The article number provides information about the type, size and materials of the fitting. You will also find details of the pipe size, the material used and, if required, other information, such as the temperature range, on the press ring.

The batch number provides information on the year of production, producer and linked quality assurance documents.

The batch and article numbers enable you to trace each fitting back to a specific batch and view the stored quality assurance and material certificates.

Please contact our customer service for further details: [sales@haelok.com](mailto:sales@haelok.com)

In case of a complaint, this information is very important in order to clearly determine its cause(s).



## TOOLS

The HAELOK® system comprises four press tools which cover the entire range from 6 mm to 114.3 mm (DN 100). The name (art. no.) of the tool refers to this range. A PT-3060 is suitable for fittings from 30 mm to 60.3 mm. The fine gradation within this tool is achieved by changeable inlays.

The catalogue provides information on which tools and inlays are available.

Detailed information on the space requirements of the respective tools can be found from page 34 onwards.



**PT0613**



Instead of inlays, the PT0613 has a rotating swivel head for fittings 6-9 mm and opposite 10-13 mm.

**PT1228**



The PT1228 can cover a range from 12 mm to 28 mm. The inlays are held in place magnetically and the tool locks in both the closed and open position.

**PT3060**



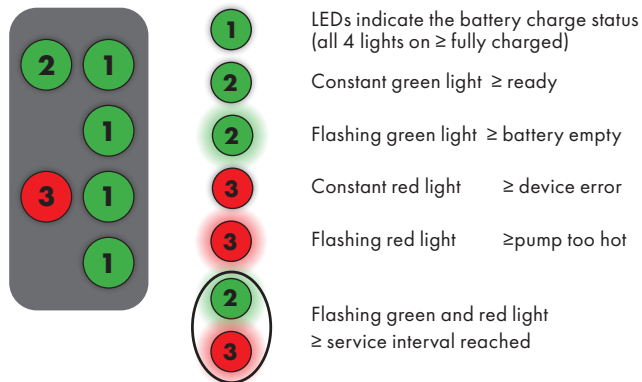
The PT3060 can cover a range from 30 mm to 60,3 mm. The inner inlays are held in place magnetically and the outer ones are secured with screws. The tool only locks in the closed position – not in the open position. This is due to handling and safety.

The aforementioned tools use the same battery-operated hydraulic pump. This pump cannot be separated from the press head. When the button is pressed, a pressure of 700 bar is built up, which brings the tension rings into the end position and presses the fitting. When 700 bar is reached, the pump is automatically switched off and the system is depressurised.

This means that the position of the tension rings is not checked. In case of failure, 700 bar may be reached before the fitting is fully compressed and the pump still switches off due to the pressure.

There is a black rubber button on the side of the pump for manual depressurisation of the system.

An LED display in the start button provides information on operational readiness and the battery charge status.



It takes approx. 40 minutes to charge a battery. This charge is sufficient for 50-200 pressing operations, depending on the tool, fitting and pipe wall thickness.

The pumps are fitted with a belt clip for easy handling. This is fastened with two nylon screws, which form a predetermined breaking point. Replace these only with original Novopress screws, which are available from us.

Each tool is supplied with detailed operating instructions with further information and safety instructions. Information on hazardous substances (e.g. the hydraulic oil used and the Li-ion batteries) can also be found there.



As the largest tool in the range, PS76114 is used for fitting sizes from 76 to 114 mm (DN65, DN80 and DN100). In order to comply with the applicable work regulations, this tool is divided into two parts and is connected by 4 locking pins. It is driven by a mains-powered pump.

The function is identical to the smaller devices mentioned above.

The tool also has two adjusting screws that allow the pipe to be centred.



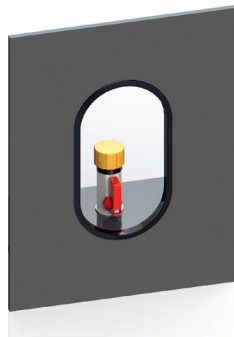
The hydraulic hoses supplied can be used to press two fittings together at a maximum distance of 12 metres and can be combined individually. Additional hoses for extension are available.

Please note that hydraulic hoses have a limited service life and must be replaced when this expires. This is taken into account during the recommended annual service of the tools which includes replacing the hoses.

The hydraulic tank has a capacity of 5 litres and can be refilled with conventional hydraulic oil. There is a vent cap on the tank which cannot be closed. The valve must always be open for the pressing process and closed for transport.



closed



open

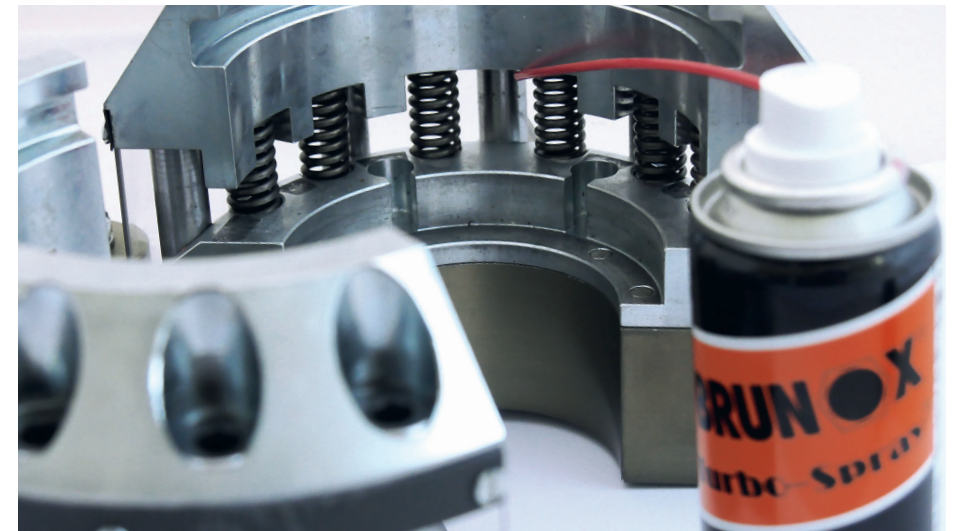
## CLEANING/MAINTENANCE

The tools must be cleaned and maintained regularly. If the tool has been used in a wet environment (e.g. in the rain), it must be cleaned and dried immediately afterwards.

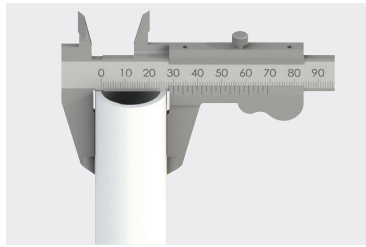
To do this, first remove coarse dirt from the press head and the pump with a brush. Then wipe with a damp cloth and dry. During cleaning, also check the tool for damage or irregularities. Particular attention should be paid to the hydraulic cylinders and the inlays.

Finally, lightly grease the cylinders on the tension ring with the enclosed Brunox lubricant.

Under no circumstances should the tool be cleaned wet, e.g. sprayed with water or immersed.

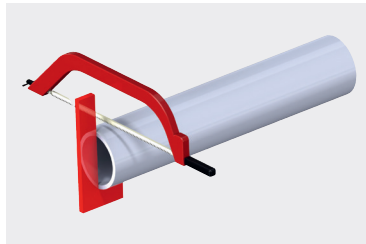


## INSTALLATION INSTRUCTIONS



### 1. MEASURING

The user must know what type of pipe he is pressing and ensure that it matches the fitting used and that the required tolerances are complied with. If necessary, measure the pipe size and wall thickness and check for compliance with the tolerances permitted by HAELOK®.



### 2. CUTTING TO LENGTH

Inspect the pipe for surface defects (see next chapter) and cut it off at right angles. Insulation must be removed over a length of 100 mm (PT1228/PT3060) or 200 mm (PS76114).



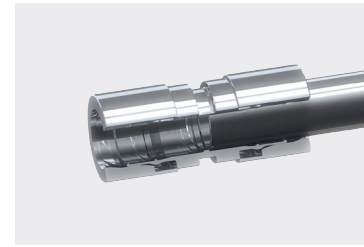
### 3. DEBURRING AND GRINDING

Deburr the inside and outside of the pipe end. This protects against damage, injury and contamination. Remove rust stains, grooves and dirt. Do not use an angle grinder for this, but a tube belt sander if necessary. (Please refer to the examples on page 24)



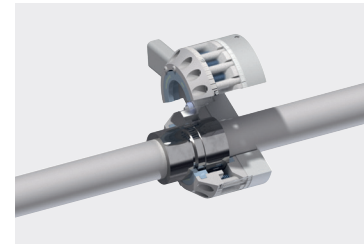
### 4. MARKING

Use the HAELOK® marking tool to mark the fitting position, especially for repair fittings.



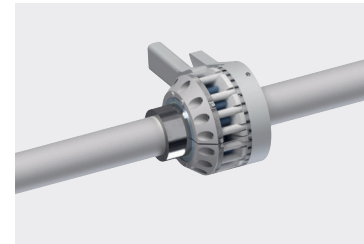
### 5. INSERTING

Insert the pipe up to the corresponding mark on the pipe. The stop is reached for all except repair-fitting. The fitting must lie on the pipe without tension. This is the only way to centre the fitting on the pipe. Also note the weight of the tool.



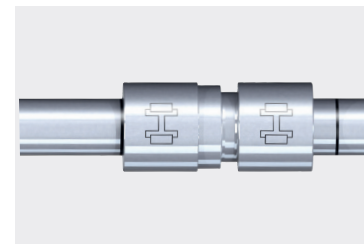
### 6. POSITIONING

Position the press tool and ensure that the inlay of the press tool is correctly seated in the groove of the fitting. Lock the tool.



### 7. PRESSING

Now all you have to do is press and hold the press button on the hydraulic unit – the pressing process starts. The process stops automatically (if functioning correctly) when the fitting is pressed.



### 8. CONTROLLING

If the press ring is flush with the rear edge and the "H" of the marking is visible, it means that a reliable HAELOK® connection has been established.

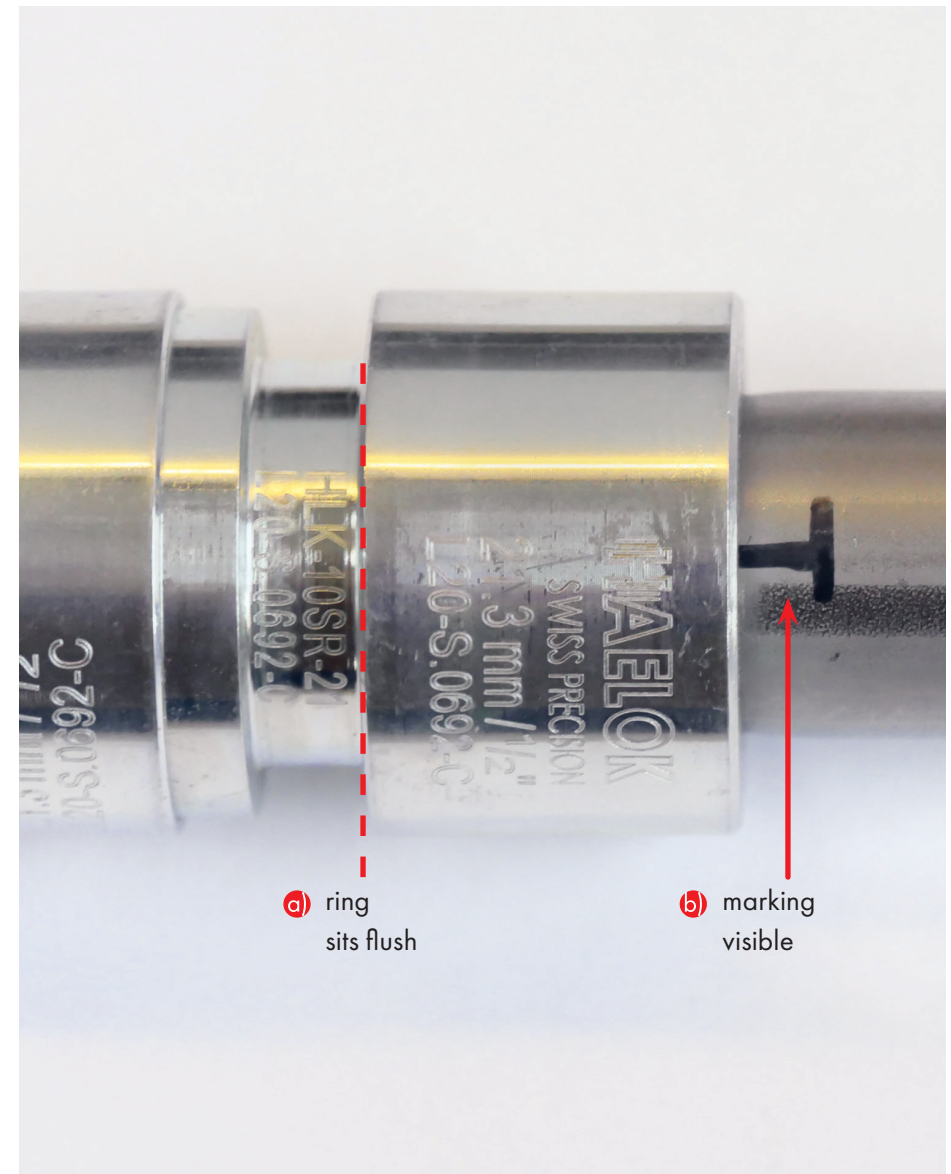
## CONTROL

The fitting is correctly pressed when:

- a) The press ring sits flush with the shoulder and
- b) The marking on the pipe is correctly visible

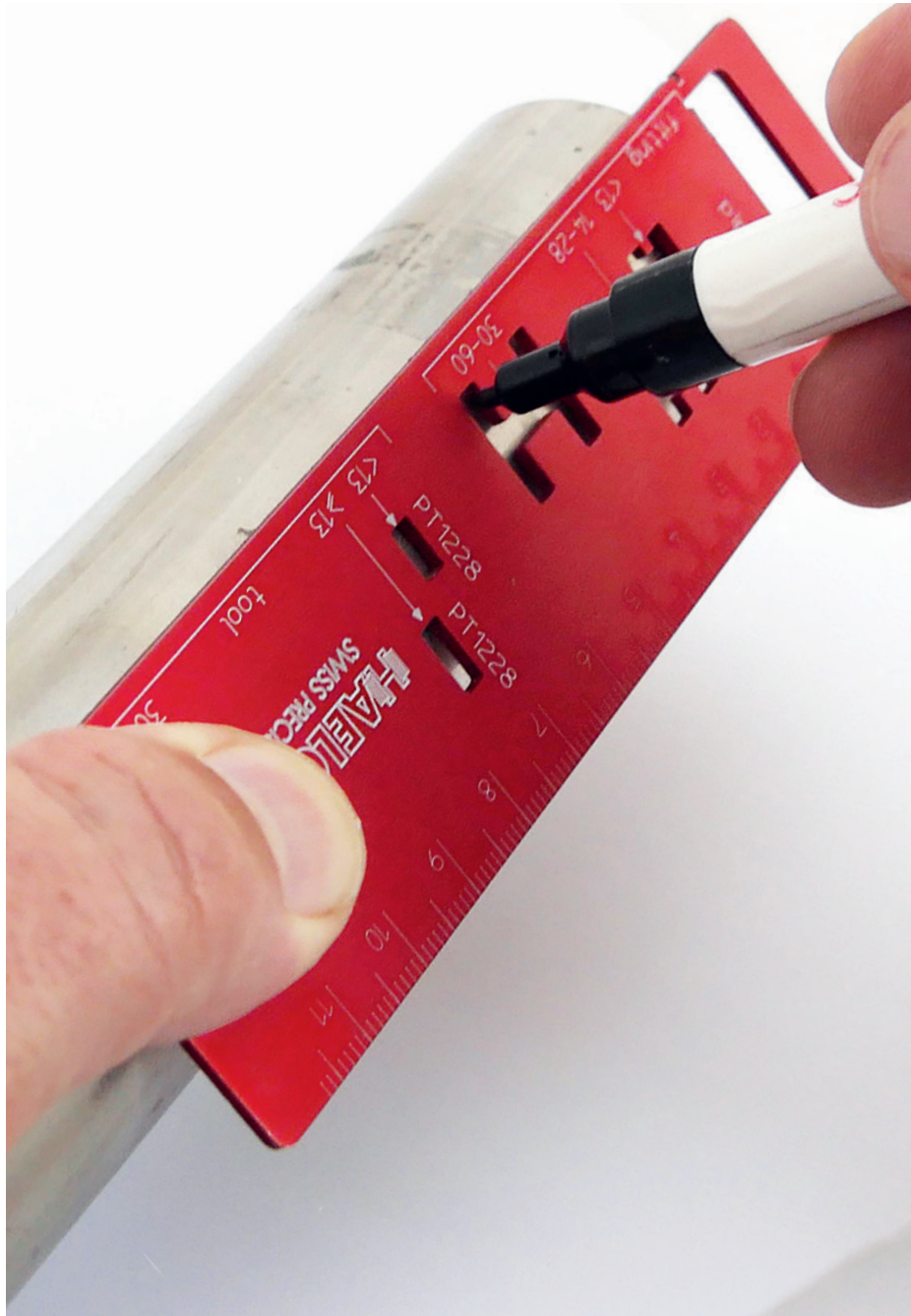
This allows you to quickly and easily determine (without test equipment) whether the connection has been made correctly, even retrospectively. HAELOK®!

If the press ring is completely displaced **a)**, the fitting will constrict completely. It is impossible to tilt, forget or incorrectly fit parts. If the pipe is in the right position **b)**, you have created a high-quality, tight connection. It is a metallic form connection and forcefit.



a) ring  
sits flush

b) marking  
visible



## USE OF THE MARKING TOOL

### STEP 1

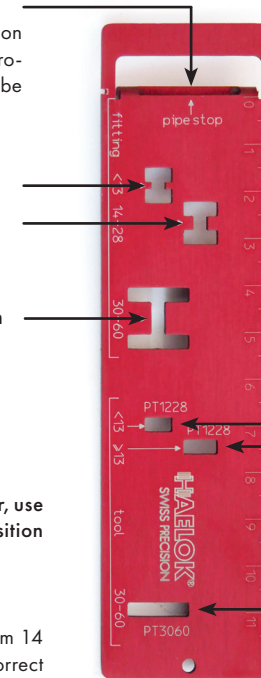
#### Pipe stop

Place the template with the pipe stop firmly on the pipe end and mark the pipe at the appropriate mark for the fitting and press tool to be used.

Fitting ≤13 mm

Fitting 14–28 mm

Fitting 30–60 mm



Presstool <13 mm  
Presstool 14–28 mm

Presstool 30–60 mm

### STEP 2

#### Fitting ≤13 mm

If you are using a fitting of 13 mm or smaller, use this mark to indicate the correct fitting position on the pipe.

#### Fitting 14–28 mm

If you are using a fitting in the size range from 14 mm to 28 mm, use this mark to indicate the correct fitting position on the pipe..

#### Fitting 30–60 mm

If you are using a fitting in the size range from 30 mm to 60 mm, use this mark to indicate the correct fitting position on the pipe.

### STEP 3

#### Presstool <13 mm

Use this mark to mark all fittings of 13 mm or smaller with the PT0613 tool to check the tool edge on the pipe.

#### Presstool 14–28 mm

Use this mark to mark all fittings from 14 mm to 28 mm with the PT1228 tool to check the tool edge on the pipe.

#### Presstool 30–60mm

Use this mark to mark all fittings from 30 mm to 60 mm with the PT3060 tool to check the tool edge on the pipe.

The H mark limits the position of the press ring before and after the pressing process.

We recommend using the supplied permanent marker 1–4 mm for marking.



### SURFACE EXAMPLES

#### POSITIVE



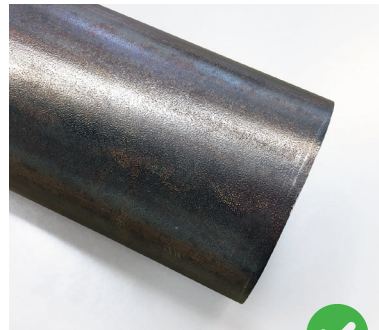
Good pipe stainless steel



Good pipe steel



Good pipe ground



Good surface steel



#### NEGATIVE



Number punches



Engraved



#### NEGATIVE



Rust



Plastic casing pipe not deburred, residues, surface cannot be assessed



Grooves



Unclean weld seam



Weld seam



Shot-blasted pipe



### AREA TO BE SAND

Size	lip area	area to be ground*
6–13 mm	9 und 17 mm	5–20 mm
14–28 mm	12 und 25 mm	10–30 mm
30–60 mm	23 und 42 mm	20–50 mm
30–60 mm	40 und 76 mm	35–80 mm

\*measured from the pipe end



#### RECOMMENDATION FOR DISTRICT HEATING

Do not use an angle grinder for this purpose, instead, use a tube belt sander if necessary.

## TROUBLESHOOTING

### THE FITTING DOES NOT FIT THE PIPE.

→ Check the pipe dimensions and whether you can use the corresponding fitting.

### THE INLAYS CANNOT BE INSERTED

→ Check the tool and inlays for damage. You may only press with flawless material.

### THE TOOL DOES NOT CLOSE

→ Check the fit of the inlays and the tool for damage or dirt. You may only press with a locked tool..

### THE PUMP HAS RUN THROUGH (DEPRESSURISED), BUT THE FITTING HAS NOT BEEN FULLY PRESSED

→ In the case of very thick-walled pipes (stainless steel) or if the pipes have not been inserted stress-free (tilted), the pump may reach 700 bar before the fitting is fully pressed. You can “re-press” several times and, if possible, rotate the tool by 180°.

## FURTHER INFORMATION:

- Press tools ≥ page 34
- Technical data: information on the weight and dimensions of the fittings can be found in the HAELOK® catalogue

[www.haelok.com/en/downloads](http://www.haelok.com/en/downloads)





## STEEL (CC) Technical Data

### PIPES

#### Approved pipe tolerances and corresponding standards

##### Inch pipe outside diameter

DN	Size	Nominal outer-ø according to standard		Permissible wall thickness HLK-10 (Standard)		Permissible wall thickness HLK-12 (THERMO)	
		OD1 <sub>nom</sub>	OD2 <sub>nom</sub>	s <sub>min</sub>	s <sub>max</sub>	s <sub>min</sub>	s <sub>max</sub>
8	¼"	13.50	13.72	1.60	2.30	1.60	2.30
10	⅜"	17.20	17.15	1.60	2.80	1.60	2.60
15	½"	21.30	21.26	1.60	2.80	1.60	2.60
20	¾"	26.90	26.67	2.10	3.90	2.00	2.60
25	1"	33.70	33.41	2.60	4.60	2.30	3.20
32	1¼"	42.40	42.16	2.60	5.10	2.30	3.60
40	1½"	48.30	48.26	2.60	5.10	2.30	3.60
50	2"	60.30	60.33	2.60	5.50	2.30	3.60
65	2½"	76.10	76.10	2.30	5.00	2.30	4.00
80	3"	88.90	88.90	2.30	6.00	2.30	4.50
100	4"	114.30	114.30	2.60	6.00	2.60	4.50

#### MATCHING PIPE SPECIFICATIONS STEEL (CC)

OD1 EN 10305, EN 10220, EN 10255  
 OD2 ASTM A213 (Schedule 10/40)

#### MATCHING PIPE SPECIFICATIONS THERMO® STEEL (CC)

OD1 EN 253, EN10217-1, EN10217-2  
 EN 10216-1, EN 10216-2

#### CONFORM TO

ASME B31.1 & B31.3 & FFI

All dimensions in mm; others are specifically marked.  
 Subject to printing errors and technical changes. 2024-04

## STAHL (CC) Technical Data

### PRESSURE & TEMPERATURE

#### Applications and burst pressure testing of our fittings

##### Inch pipe outside diameter

DN	Size	OD <sub>nom</sub>	PN (nominal pressure) Safety factor 2	s (wall thickness)	Burst pressure test
8	¼"	13.5	600 bar	1.8	1137 bar
10	⅜"	17.2	400 bar	1.8	800 bar
15	½"	21.3	400 bar	2.0	800 bar
20	¾"	26.9	400 bar	2.3	800 bar
25	1"	33.7	400 bar	2.6	800 bar
32	1¼"	42.4	300 bar	2.6	600 bar
40	1½"	48.3	300 bar	2.6	600 bar
50	2"	60.3	300 bar	2.6	600 bar
65	2½"	76.1	125 bar	3.2	250 bar
80	3"	88.9	125 bar	3.2	250 bar
100	4"	114.3	125 bar	3.6	250 bar

#### Temperature ranges

Temp C°	C-Stahl (CC)
50	0%
100	10%
150	21%
200	31%
250	37%
300	45%

Temperature range is from -20°C to +300°C, depending on the material used.

At raised temperatures the maximum working pressure must be reduced by the value according to the table:

Flow coefficients are available on request.

##### Usable pipes

HAELOK® fittings can be used for carbon steel pipes and primed carbon steel pipes. Seamless or welded.

The pipe surface must be clean and without grooves or heavy grooves. (Grooves > 0.1 mm are not permitted)

Loose mill scale, scale and rust must be removed. Hot-rolled pipes or pipes with a scaly surface are not permitted.

Pipe hardness: maximum values of 90 (Rockwell B) are permissible.

All dimensions in mm; others are specifically marked.  
 Subject to printing errors and technical changes. 2024-04

## STAINLESS STEEL (XX) Technical Data

### PIPES & TEMPERATURE

#### Approved pipe tolerances and corresponding standards

##### Inch pipe outside diameter

DN	Grösse	Nominal outer-ø according to standard		Permissible wall thickness	
		OD1 <sub>nom</sub>	OD2 <sub>nom</sub>	s <sub>min</sub>	s <sub>max</sub>
8	¼"	13.50	13.72	1.60	2.30
10	⅜"	17.20	17.15	1.60	2.77
15	½"	21.30	21.26	1.60	2.77
20	¾"	26.90	26.67	2.11	3.91
25	1"	33.70	33.41	2.60	4.55
32	1 ¼"	42.40	42.16	2.60	5.08
40	1 ½"	48.30	48.26	2.60	5.08
50	2"	60.30	60.33	2.60	5.54
65	2 ½"	76.10	73.03	2.30	5.00
80	3"	88.90	88.90	2.30	5.54
100	4"	114.30	114.30	3.60	5.54

##### Usable pipes

HAELOK fittings are applicable for stainless steel pipes. Seamless or welded.

The pipe surface must be clean and without grooves or heavy grooves. (Grooves > 0.1 mm are not permitted)

Loose mill scale, scale and rust must be removed. Hot-rolled pipes or pipes with a scaly surface are not permitted.

Pipe hardness: maximum values of 90 (Rockwell B) are permissible.

## STAINLESS STEEL (XX) Technical Data

### PIPES & TEMPERATURE

#### Approved pipe tolerances and corresponding standards

##### Metric pipe outside diameter

d	Nominal outer-ø according to standard		Permissible wall thickness	
	OD1-2 <sub>nom</sub>	s <sub>min</sub>	s <sub>max</sub>	
10	10	1.0	2	
12	12	1.50	2	
15	15	1.50	3	
16	16	1.50	3	
18	18	1.50	3	
20	20	1.50	3	
22	22	1.50	3	
25	25	1.50	3	
28	28	1.50	3	
30	30	1.50	3	
35	35	2.00	3	
38	38	2.00	4	
42	42	2.00	4	

#### MATCHING PIPE SPECIFICATIONS STAINLESS STEEL (XX) Tolerances D3 and T3

OD1 EN 10217-7, EN 10216-5, EN ISO 1127  
OD2 ASTM A268, A269

##### Temperature ranges

Temp C°	Stainless Steel (XX)
50	4%
100	12%
150	15%
200	20%
250	25%
300	30%
350	33%
400	35%

Temperature range is from -196°C to +400°C, depending on the material used.

At raised temperatures the maximum working pressure must be reduced according to the table:

Flow coefficients are available on request.

## STAINLESS STEEL (XX) Technical Data

### PRESSURE

#### Applications and burst pressure testing of our fittings

##### Inch tube outside diameter

DN	Size	OD	PN (nominal pressure) Safety factor 2	PN (IACS) Safety factor 4	s (wall thickness)	Burst pressure test
8	¼"	13.5	600 bar	300 bar	1.8	1137 bar
10	⅜"	17.2	400 bar	200 bar	1.8	800 bar
15	½"	21.3	400 bar	200 bar	2.0	800 bar
20	¾"	26.9	400 bar	200 bar	2.3	800 bar
25	1"	33.7	400 bar	200 bar	2.6	800 bar
32	1 ¼"	42.4	300 bar	150 bar	2.6	600 bar
40	1 ½"	48.3	300 bar	150 bar	2.6	600 bar
50	2"	60.3	300 bar	150 bar	2.6	600 bar
65	2 ½"	76.1	125 bar	n.a.	3.2	250 bar
80	3"	88.9	125 bar	n.a.	3.2	250 bar
100	4"	114.3	125 bar	n.a.	3.6	250 bar

All dimensions in mm; others are specifically marked.  
Subject to printing errors and technical changes. 2024-04

## STAINLESS STEEL (XX) Technical Data

### PRESSURE

#### Applications and burst pressure testing of our fittings

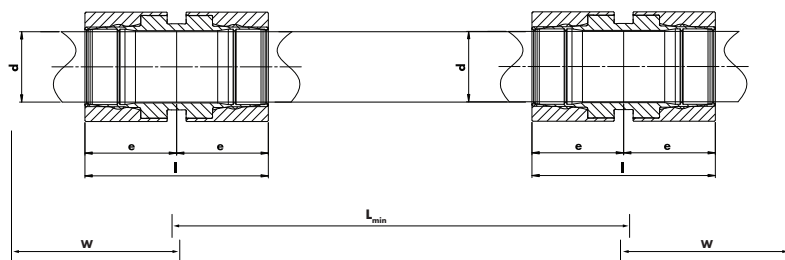
##### Metric tube outside diameter

Size	OD	PN (nominal pressure) Safety factor 2	PN (IACS) Safety factor 4	s (wall thickness)	Burst pressure test
10	10	600 bar	300 bar	1.5	1137 bar
12	12	600 bar	300 bar	1.5	1137 bar
15	15	400 bar	200 bar	1.5	800 bar
16	16	400 bar	200 bar	1.5	800 bar
18	18	400 bar	200 bar	1.5	800 bar
20	20	400 bar	200 bar	2	800 bar
22	22	400 bar	200 bar	2	800 bar
25	25	400 bar	200 bar	2.5	800 bar
28	28	400 bar	200 bar	2.5	800 bar
30	30	400 bar	200 bar	3	800 bar
35	35	300 bar	150 bar	3	600 bar
38	38	300 bar	150 bar	3	600 bar
42	42	300 bar	150 bar	3	600 bar

All dimensions in mm; others are specifically marked.  
Subject to printing errors and technical changes. 2024-04

## HAELOK® INSTALLATION DETAILS.

### Minimum pipe length for repair applications ( $L_{min}$ )

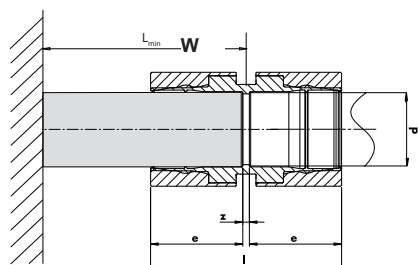


Press tool	$L_{min}^*$	W	l	e
PT0613	60	200	37	18.5
PT1228	116	90	52	26
PT3060	174	130	87	43.5
PT 76114	290	200	155	75.5

\*  $L_{min}$  = width of the tool before pressing

All dimensions in millimetres, unless specifically marked.

### Minimum installation length for the tool (W)

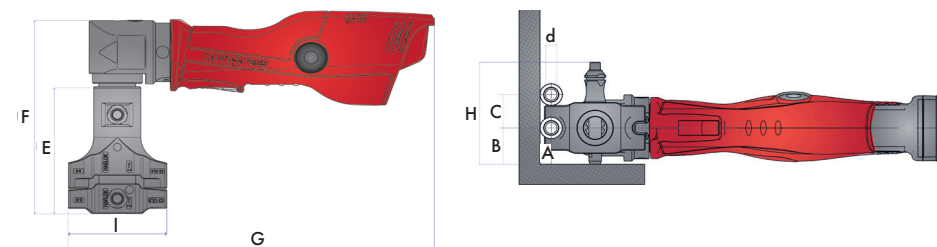


Press tool	W*	l <sub>pressed</sub>	l <sub>unpressed</sub>	e	z
PT0613	200	37	46	17	3
PT1228	90	52	61	25	2
PT3060	130	87	107	42	3
PT 76114	200	155	195.5	75.5	4

\* minimum distance of the tool from the wall

All dimensions in mm; others are specifically marked.

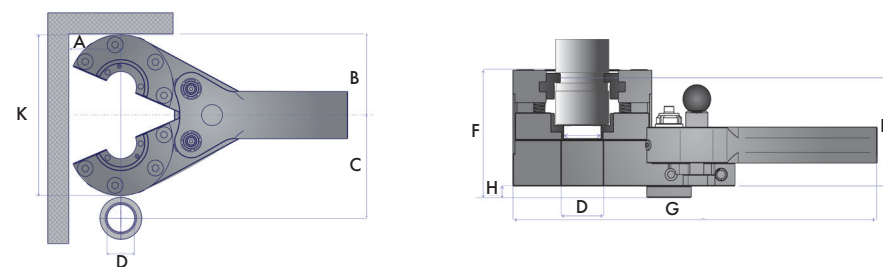
## SPACE REQUIREMENT FOR TOOLS



### Press tool set 0613

Set includes: press tool, hydraulic unit, two batteries incl. charger, transport case

Article No.	d	A	B	C	E	F	G	H	I	Press time (ø,sec)	Weight (g)	VE (pcs.)
HLK-61PT-0613	6-13	7	40	28-32	129.8	197.5	358.5	112	96.5	5-10	3600	1



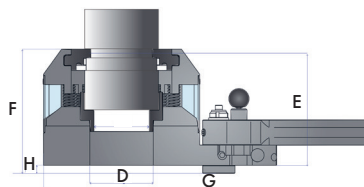
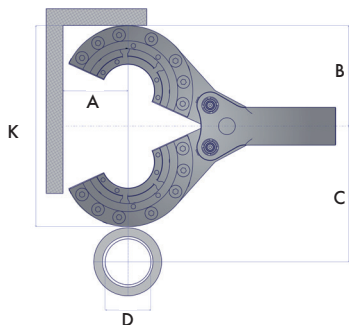
### Press tool set PT1228

Set includes: press tool, hydraulic unit, two batteries incl. charger, transport case

Article No.	d	A	B	C	E	H	F	G	D	K	K (closed tool)	Press time (ø,sec)	Weight (g)	VE (pcs.)
HLK-61PT-1228	12-28	67	100	114-124	75.25	8	89	262.5	30	153.2	134	12-15	6800	1

All dimensions in mm; others are specifically marked. Subject to printing errors and technical changes.

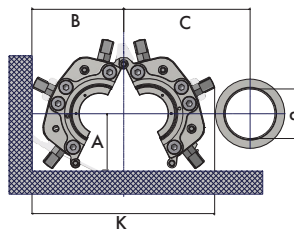
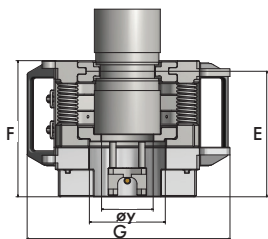
## SPACE REQUIREMENT FOR TOOLS



### Press tool set PT3060

Set includes: press tool, hydraulic unit, two batteries incl. charger, transport case

Article No.	d	A	B	C	E	H	F	G	D	K	K (closed tool)	Press time ( $\varnothing$ ,sec)	Weight (g)	VE (pcs.)
HLK-61PT-3060	30-60	80	110	140-150	110.75	8	128	324	63	240	160	16-20	8000	1



### Press tool set PS76114

Set includes: press tool with 2m hydraulic hose (per side), 1x hydraulic hose 5m with distribution block, inlays, case

Article No.	d	A	B	C	D	F	G	$\varnothing y$	K	K (closed tool)	Press time ( $\varnothing$ ,sec)	Weight (g)	VE (pcs.)
HLK-61PT-76114	76-114	137	223	192-209	195	211.5	315.2	117.95	425	321	20-30	32	1

All dimensions in mm; others are specifically marked. Subject to printing errors and technical changes.



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**HAELOK AG**

Rütistrasse 26 | 8952 Schlieren | Switzerland

+41 43 501 4550

sales@haelok.com

www.haelok.com

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**Imprint**

Design Claudia Lutz / 3rd edition 300 copies / Handbook English version valid from April 2024  
©HAELOK AG, Rütistrasse 26, 8952 Schlieren, Switzerland, +41 43 501 4550, sales@haelok.com  
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