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LESER Global Standard Assembly instructions for series 441, 441 Full nozzle, 458,

429, 433, types 440, 424, 546



Product group	Туре
High Performance	441, 442 DIN/ANSI, 441, 442 Full nozzle DIN/ANSI, 455, 456, 457, 458
Modulate Action	433
S & R	440, 424
Critical Service	546

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Assembly instructions for series 441, 441 Full nozzle, 458, 429, 433, types 440, 424, 546

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1 Purpose

This LESER Global Standard (LGS) is assembly documentation for different assembly cases for LESER safety valves of the High Performance series. The required work steps, tools and materials are described.

2 Scope

This document must be used for the assembly of a High Performance safety valve in agencies and subsidiaries of LESER GmbH & Co. KG.

3 References

LGS 3325	(LWN 322-04)
WI 3308-08	(LWN 308.08)
LGS 3324	(LWN 324.01)
LGS 3323	(LWN 322.02)
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4 Disclaimer

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5 Qualified assembly personnel

The assembly of LESER safety valves may only be performed by trained or qualified assembly personnel. The qualifications must be obtained through the appropriate training measures.

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6 General Information



• Gloves must be worn during the entire assembly.

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7 General illustration



Fig. 7-1 Cross sectional drawing of High Performance 441.

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Fig. 7-2 Cross sectional drawing of High Performance 458.

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8 Preparation for valve assembly

8.1 Hammer in the punch numbers (if requested in the order).

Illustrations	Description	Aids / Tools
Figure 8 1.1	Hammer in the markings on the edge of the outlet flange.	Hammer Punch numbers
Figure 8.1-1		

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9 Assembly of the High Performance series

9.1 Assembly of the nozzle (types 441 Full Nozzle, 442 Full Nozzle, 457, 458)

Illustrations	Description	Aids / Tools
Figure 9.1-1	Grease sealing surface	Assembly grease (Molykote Paste), brush
	Leave the protection cap on	
	damage.	
Figure 9.1-2	Screw nozzle into the body.	

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Global	LESE	R Global Standard	450	LGS 4101	
Standard	Assembly instructions 1 429, 433	Assembly instructions for series 441, 441 Full nozzle, 458, 429, 433, types 440, 424, 546			
Figure 9.1-	3	Tighten nozzle with C-spanner (put a small protective slab between the nozzle and C- spanner).	C-spa nose	nner with a	

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9.2 Assembly of the seat and the seat screw (types 431, 433 PN160)

Illustrations	Description	Aids / Tools
Figure 9.1-1	Grease sealing surface of the seat and put it in the body.	Assembly grease (Molykote Paste), brush
	Grease sealing surface of the seat screw and put it in the thread of the body.	
Figure 9.1-2	Put the assembly device 60S.2512.3305 on the seat screw and tighten the seat screw with turning moment	

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9.3 Screw the studs into the body.

Illustrations	Description	Aids / Tools
<image/> <image/>	Screw in the studs with an impact wrench. Tip: Place the guide washer on the opening of the body so that no studs can fall on the seat.	Impact wrench

9.4 Disc assembly

9.4.1 Assembly of the disc with rotating lifting aid and rollpin

Illustrations	Description	Aids / Tools
Figure 9.4.1-1	Individual parts of the disc with rotating lifting aid	

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Illustrations	Description	Aids / Tools
Figure 9.4.1-2	Crimp the pin inwards at one end to make assembly easier.	Anvil Hammer
	Use the head of the hammer to lightly curve the pin (hit in the middle of the pin).	
Figure 9.4.1-3	Put the assembly together (it	
Figure 9.4 1-4	must be easy to move the disc in the lifting aid by 360°) and secure it with pins.	

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Standard	Assembly instructions for series 441, 441 Full nozzle, 458, 429, 433, types 440, 424, 546						e 13/63	
9.4.2 As	sembly	of the disc with a	a lifting aid a	ind a securing i	ring			
Illustratio	ns			Description		Aids / T	ools	
	1			Put the disc in aid with hands. ATTENTION: S surface must n damaged!!!	the lifting Sealing ot be	-		
Figure 9.4	.22-1			Clamp the disc clamping vice a the marked end Figure 9.3.2-3) securing ring ir recess on the s the disc with ha	on the and insert d (see of the the side of ands.	Clamping) Vice	public
Figure 9.4	.22-3							
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Global	LESER Glok	bal Standard	LGS 4101
Standard	429, 433, types	s 440, 424, 546	Page 14/63
Figure 9.4.	22-4	Rotate the lifting aid with the sickle spanner.	
Figure 9.4.	<image/>	Rotate the lifting aid until the other end of the securing ring sits in the recess of the disc.Optional: A very slight 	
Figure 9.4.	22-6	permitted to rotate the disc after this bent point while tightening. <u>Reason</u> : Torque increases exponentially if the disc is rotated after this point.	

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Global	LESER Global Standard	LGS 4101
Standard	429, 433, types 440, 424, 546	Page 15/63
Figure 9.4	.22-7	
	Interview Interv	
	installed securing ring is not permissible.	

9.4.3 Disc assembly, O-ring disc

Illustrations	Description	Aids / Tools
	Individual parts of the O-ring disc	
Figure 9.4.3-1		

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Global	LESER (Global Standard	158	LGS 4101
Standard	429, 433, ty	ypes 440, 424, 546	, 400,	Page 16/63
Figure 9.4	.3-2	Wet O-ring with water and avoid twisting of ring when inserting.		
Figure 9.4	.3-3	Insert retainer.		

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Illustrations	Description	Aids / Tools
Figure 9.4.3-4	Screw nut onto neck and tighten. Set torque as per LGS 3325.	Torque wrench
Figure 9.4.3-5	Secure the nut by hitting it with a centre punch. Hammer in the marking for the O-Ring material according to WI 3308-08.	Centre punch Hammer Punch numbers

9.4.4	Disc assembly,	sealing	plate
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Illustrations	Description	Aids / Tools
Figure 9.4.4-1	Put the sealing plate in the disc.	

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	,, , , , , , , , , , , , , , , ,	,,		I
Illustratio	ns	Description	Aids / Tools	
Figure 9.4	<image/>	Put the retainer on the sealing plate.		
Figure 9.4	A-3	Screw nut onto threaded neck and tighten. Set torque as per LGS 3325.	Torque wrench	public
Figure 9.4	t.4-4	Secure the nut by hitting it with a centre punch Hammer in the marking for the sealing plate material according to WI 3308-08.	Punch numbers Hammer Centre punch	

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StandardLESER Global StandardLGS 4101Assembly instructions for series 441, 441 Full nozzle, 458,
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9.5 Assembly of spindle/disc assembly

9.5.1 Assembly of spindle/disc assembly (without bellows)

Illustrations	Description	Aids / Tools	
	Put the ball into the disc body.		
Figure 9.5.1-1			
Figure 9.5.1-2	Put the spindle in the disc and secure with a pin.		public
	Put on lift stopper, if required.		
Figure 9.5.1-3			

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Illustrations	Description	Aids / Tools
Figure 9.5.1-4	Push the guide washer onto the spindle.	
Figure 9.5.1-5	Put half-washers in the recess of the spindle and secure with a retaining clip.	
Figure 9.5.1-6	Push the lower spring plate, the spring and the upper spring plate over the spindle one after the other.	

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Illustrations	Description	Aids / Tools
Figure 9.5.1-7	Push the spacer onto the top spring disc.	

9.5.2 Assembly of spindle/disc assembly (with stainless steel bellows)

Illustrations	Description	Aids / Tools	
Figure 9.5.2-1	Some bellows versions must be screwed together.		public
Figure 9.5.2-2	If the spindle has a thread on the bottom end, then put a minimal amount of superglue on it and quickly screw into the bellows.	Glue WEICON VM20/ 60H.0760.0026(Ab bildung Abweichend)	

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Illustrations	Description	Aids / Tools	
Figure 9.5.2-3	For valves that are smaller in size, the spindle must be greased first in order to avoid any friction from occurring between the bellows and spindle.		
Figure 9.5.2-4	Insert the ball into the disc body.		public
Figure 9.5.2-5	Put the stainless steel bellows into the disc and secure with a pin.	Lubricant	

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Illustrations	Description	Aida				
<complex-block></complex-block>	Description If required insert the lift stopper.	Aids Ham Pin p	ner ounch			
Faltenbalgausführung Edelstahl -103139	For the types 433 DN 20, 25, 32 and 441 DN 20 the lift stopper (Mat. Nr.: 292.A000.0378) replaces the Retaining Clip 8x1 (Mat. Nr.: 491.1103.0000)					

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Illustrations	Description	Aide / Teele
inustrations	Description	AIds / TOOIS
Figure 0.5.28	Place the sealing ring on the bellows.	
Figure 9.5.2-0		

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Illustrations	Description	Aids / Tools
Figure 9.5.2-9	Put on the guide washer (if bellows are not already screwed together with the guide washer)	
Figure 9.5.2-10	Put half-washers in the recess of the spindle and secure with a retaining clip.	
Figure 9.5.2-11	Push on the bottom spring plate.	

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doc. type:	LGS	change rep. No.:	NA	retention period:	10y.		



9.5.3 Assembly of spindle/disc assembly (with elastomer bellows)

Illustrations	Description	Aids / Tools
Firm 2.54	Put the ball into the disc body.	
Figure 9.5.3-1	Put the spindle in the disc and secure with a pin.	
Figure 9.5.3-3	CAUTION: The pin is shorter than usual and must not protrude so that the elastomer bellows are not damaged later.	

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Standard Asse	Standard 429, 433, types 440,			Page 27/63
Illustrations		Description	Aids	/ Tools
	0	Elastomer bellows, hose clamps and guide washer		
Figure 9.5.3-4		Put the hose clamp onto the elastomer bellows and put both together over the guide washer.		
Figure 9.5.3-6		Tighten the hose clamp with pliers.	Plier	S

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Standard	Assembly instructions for serie 429 433 types	es 441, 441 ⊢ull nozzle, 458 440, 424, 546	, Page 28/63
	120, 100, 19900		
Illustration	ns	Description	Aids / Tools
Figure 9.5	3-7	Put the second hose clamp with the lock opposite the first hose clamp on the elastomer bellows.	
Figure 9.5	.3-8	Put the elastomer bellows on the spindle over the neck of the disc.	
Figure 9.5	3-9	Tighten the second hose clamp with pliers. Attention! The hole for the pin and lock of the hose clamp must not lie on the seam of the elastomer bellows!	Pliers

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· · · · · · · · · · · · · · · · · · ·		
15	Description	Aids / Tools
3-10	Put half-washers in the recess of the spindle and secure with a retaining clip.	
<image/> <image/>	Push the lower spring plate, the spring and the upper spring plate onto the spindle.	
	<text><text><text><image/><image/></text></text></text>	The-Sa LESER Global Standard Assembly instructions for series 441, 441 Full nozzle, 458, 429, 433, types 440, 424, 546 S Description Image: Signal Signa

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9.6 Inserting the assembly

9.6.1 Inserting the assembly (without bellows or with elastomer bellows)

Illustrations	Description	Aids / Tools	
Figure 66.44	Put the sealing ring in the sealing surface. Put the assembly (depending on the weight and size with or without the spring and top spring plate) carefully into the outlet body.		
	In the process, push the guide washer		
Figure 9.6.1-2	down and lift the spindle somewhat so that the disc does not touch down.		papilo
	Carefully put the disc with the spindle down on the seat.		
Figure 9.6.1-3	Put on the spring and top spring plate (if not already done).		

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9.6.2 Inserting the assembly (with stainless steel bellows).

Illustrations	Description	Aids / Tools
Figure 9.6.2-1	Place the sealing ring in the sealing surface of the body.	
	Put the bonnet spacer / cooling zone on the body. Insert the sealing ring in the bonnet spacer / cooling zone.	
Figure 9.6.2-2	Put the assembly (depending	
	on the weight and size with or without the spring and top spring plate) carefully into the outlet body.	
	In the process, push the guide washer down and lift the spindle somewhat so that the disc does not touch down.	
Figure 9.6.2-3	Carefully put the disc with the spindle onto the seat.	

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Illustrations	Description	Aids / Tools
Figure 9.6.2-4	Put on the spring and top spring plate (if not already done).	
Figure 9.6.2-5	If a thrust bearing is necessary, then assemble as follows: Adapt the axial needle roller to the top disc plate and grease.	Brush Halocarbon (OI-56 S / 60H)
Figure 9.6.2-6	Put the bearing washer on the axial needle roller and grease as well.	

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- 9.7 Assembly of the bonnet
- 9.7.1 Assembly of the bonnet up to DN 65 (AKL) with and without bellows
- 9.7.1.1 Assembly of the bonnet up to DN 65 (AKL) without bellows or with elastomer bellows

Illustrations	Description	Aids / Tools	
	Put the bonnet on the body.		
Figure 9.7.1.1-1			
Figure 9.7.1.1-2	Screw on the nuts and tighten (torque as per LGS 3324).	Open-end spanner Torque wrench	public

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9.7.1.2 Assembly of bonnet up to DN 65 with stainless steel bellows

Illustrations	Description	Aids / Tools
Find the tend to be tend to	Put the bonnet on the body.	
	Screw on the nuts and	Open-end spanner,
Figure 9.7.1.2-Error! No sequence specified	tighten (torque as per LGS 3324).	torque wrench

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9.7.2 Assembly of bonnet as of DN 80 with and without bellows

9.7.2.1 Assembly of bonnet as of DN 80 without bellows or elastomer bellows

Illustrations	Description	Aids / Tools
Figure 9.7.2.1-1	Put the bonnet on the body and spindle/disc assembly.	
Figure 9.7.2.1-2	Put nuts on studs and tighten (torque as per LGS 3324).	Open-end spanner, torque wrench

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9.7.2.2 Assembly of bonnet as of DN 80 with stainless steel bellows

Illustrations	Description	Aids / Tools
Figure 9.7.2.2-1 Error! No sequence specified.	Put the bonnet on the body and spindle/disc assembly.	
Figure 9.7.2.2-2Error! No sequence specified.	Put nuts on studs and tighten (torque as per LGS 3324).	Torque wrench

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		Put on the cover ring. Put the gasket on the cover ring. Put on the Bonnet spacer.		

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9.8 Determination and installation of the lift stopper for small and large valves

- 9.8.1 Lift stopper with ring/sleeve
- 9.8.1.1 Procedure for small valves without bellows

Illustrations	Description	Aids / Tools	
	Take the extent to which the stroke has to be limited from the order. Insert the spindle/disc assembly without the spring and spring disc. Put on the bonnet and tighten the nuts. Make sure the adjusting screw and spindle are flush.		
Figure 9.8.1.1-1	Clamp the body in a vice on the outlet. Carefully open the disc with a screwdriver through the inlet up to the end stop.	Screwdriver	Dinding
Figure 9.8.1.1-3	Measure the spindle overlap in an opened state. Obtain the stroke requested in the order from this measurement and have the lift stopper made.	Depth gauge	

9.8.1.2 Procedure for large valves without bellows

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Look in the order to find out at which measurement the stroke is to be stopped.

Illustrations	Description	Aids / Tools
Figure 9.8.1.2-1Error! No sequence specified.	Carefully put the disc on the seat/nozzle and put the sealing ring in the body.	
Figure 9.8.1 2-2Error! No sequence	Put the guide washer on the body and use the depth gauge to measure the path from the top edge of the guide washer to the top edge of the disc.	
Figure 9.8.1.2-2Error! No sequence specified.		

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Illustrations	Description	Aids / Tools
Figure 9.8.1.2-3Error! No sequence	Deduct the measurement of the guide washer as well as the desired stroke from the order from the total dimensions and have the lift stopper made.	Depth gauge

9.8.1.3 Procedure for valves with bellows

Look in the order to find out at which measurement the stroke is to be stopped.

Illustrations	Description	Aids / Tools
Figure 9.8.1.3-1Error! No sequence specified.	Place the completely assembled disc on the seat and insert the ball. Put the bellows with the guide washer in the body, or alternatively the bonnet spacer. Insert all sealing rings. Use the depth gauge to measure the distance from the top edge of the guide washer to the bottom of the bellows, or alternatively to the built-in lift stopper. Deduct the measurement of the guide washer as well as the desired stroke from the order from the total dimensions and have the lift stopper made	Depth gauge

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9.8.2 Lift stopper with set screw (taken from LWN 324.01)

Take the extent to which the stroke has to be limited from the order.



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9.9 Adjusting the set pressure

9.9.1 Adjusting screw assembly

Illustrations	Description	Aids / Tools	
Figure 9 9 1-1	Individual parts of the adjusting screw		
Figure 9.9.1-2	Put the bushing in the adjusting screw.		public
Figure 9.9.1-3	Screw the lock nut on approximately three-quarters of the way down the adjusting screw.		

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Illustrations	Description	Aids / Tools
Figure 9.9.1-4	Grease adjusting screw	Assembly grease (Molykote Paste) Brush
Figure 9.9.1-5	Screw into the bonnet until resistance from the spring is felt.	
Figure 9.9.1-6	Secure the spindle from turning with a pin punch.	Open-end spanner Pin punch

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Illustrations	Description	Aids / Tools
Figure 9.9.1-7	Slowly pressurise the valve on the test bench to find out whether the valve opens at the set pressure. The set pressure of the valve has been reached when you can hear air escaping. Full opening must be achieved. If the valve opens outside the stipulated set pressure tolerance, then the adjusting screw must be adjusted again. → Turning in a clockwise direction causes the valve to open at a higher pressure → Turning in an anti-clockwise direction causes the valve to open at a lower pressure Release the pressure when readjusting the adjusting screw. Readjust the adjusting screw and then pressurise the valve again.	Pressure gauge
Figure 9.9.1-8	Secure the adjusting screw with the lock nut. Afterwards, check the set pressure once again.	Open-end spanner

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9.9.2 Testing the seat tightness P12

This test is performed for <u>every valve</u> after setting the pressure.

The exact execution of the test is described in a separate work instruction **AA-EF-013**.

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9.10 Assembly of the cap / lever

9.10.1 Assembly of cap H2

Illustrations	Description	Aids / Tools	
Figure 9.10.1-1	Grease the thread and sealing face of the cap.	Brush Halocarbon (OI-56 S / 60H)	
	Put on the E-CTFE sealing ring if it is shown in the parts list. Caution: The sealing ring may only be used once. If it is necessary to disassemble the cap		
Figure 9.10.1-2	the sealing ring must be replaced.		public
	Screw on the cap and tighten with a spanner (torque as per LGS 3324).	Open-end spanner Torque wrench	
Figure 9.10.1-3			

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9.10.2 Assembly of lever H3

Illustrations	Description	Aids / Tools
Figure 9.10.2-1	Push the spindle cap onto the spindle. Use a pin and retaining clip to secure.	Ring spanner
Figure 9.10.2-2	cap at designated place.	
	Grease the thread of the lever and screw it onto the bonnet	Brush Halocarbon
Figure 9.10.2-3	(lever must be opposite from outlet).	(OI-56 S / 60H)

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Illustrations	Description	Aids / Tools
Figure 9.10.2-4	Insert the venting lever into the spindle cap and fasten with a pin and retaining washers.	Pliers
Figure 9.10.2-5	Make sure that the lever has enough play to vent.	

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Illustrations	Description	Aids / Tools
Figure 9.10.2-6	Tighten the clamping screw on the lever.	Ratchet
Figure 9.10.2-7	Completely assembled lever H3	Open-end spanner

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9.10.3 Special assembly of H3

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Variante	Beschreibung	Steuerung	H3 Anlüftung
A	Position: Standard	-1-	
В	Position: 90° versetzt zum Standard (Richtung Austritt)	Sonder	
С	Position: 180° versetzt zum Standard (Richtung Austritt)	M08	
D	Position: 270° versetzt zum Standard (Richtung Austritt)	Sonder	

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- 9.10.4 Lifting devH4
- 9.10.5 Test of the lifting fork position





1. working steps

- Before the assembly of the already assembled H4 Lifting dev the position of the lifting fork within the lifting dev has to be checked to guarantee that the lifting dev is working properly.
 - With it take a look from • the thread side into the lifting dev and check the position of the lifting fork.

2. aid	
• k.A.	
3. tool	
• k.A.	
4. device	
• k.A.	

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9.10.6 Assembly of lever H4

Illustrations	Description	Aids / Tools
	Put the spindle cap onto the spindle and secure with a pin and retaining clip.	
Figure 9.10.6-1		
Figure 9.10.6-2	Put on the E-CTFE sealing ring if it is shown in the parts list. Caution: The sealing ring may only be used once. If it is necessary to disassemble the cap, the sealing ring must be replaced.	
Figure 9.10.6-3	Align the lever with sealing rings so that the lever arm is parallel to the outlet. Caution: If multiple E-CTFE sealing rings have to be used, then a metal sealing ring must be inserted between each of them. Grease the lever and matching sealing rings. Put them on and tighten with an open-end spanner (torque as per LGS 3324).	Open-end spanner

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9.10.7 Special assembly of H4

Variante	Beschreibung	Steuerung	H4 Anlüftung	
A	Position: Standard	-/-		0,8 0,7 0,5 0,4 1,0 1,0 1,0 1,0 1,0 1,0 1,0 1,0 1,0 1,0
в	Position: 90° versetzt zum Standard (Richtung Austritt)	Sonder		
с	Position: 180° versetzt zum Standard (Richtung Austritt)	M08		1,4 1,3 1,2 1,0 0,0 1,7 1,8 0,4 0,4 0,7 0,7
D	Position: 270° versetzt zum Standard (Richtung Austritt)	Sonder		1.8 0.4 0.5 0.7 0.8 0.8 0.9 0.9 1.0 1.0 1.0

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9.11 Insertion of the lift indicator

Illustrations	Description	Aids / Tools
Figure 9.10.710-1	Individual parts of the lift indicator	
Figure 9.10.710-2	Put the cap into position as described in 10.3 and secure.	Open-end spanner
40.46	Put the eccentric hole of the holder into such a position that the collar of the spindle cap would seal on top with the edge of the lift indicator.	Depth gauge
Figure 9.10.710-3		

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lilustrations	Description	AIDS / TOOIS
<image/>	Screw the lift indicator into	Open-end
Figure 9.10.710-5	Screw the lift indicator into the collar of the spindle cap as far as it will go. Then unscrew it one complete turn. Secure the position of the lift indicator by tightening the first nut hand tight. Then lock with a second nut.	Open-end spanner Depth gauge

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9.12 Assembly of the test gag / Assembly short / Plug screw

Illustrations	Description	Aids / Tools	
Figure 9.10.711-1	Grease the sealing surface of the short bolt.	Brush Halocarbon (OI-56 S / 60H)	
	Put on the sealing ring and grease it as well.	Brush Halocarbon (OI-56 S / 60H)	public
Figure 9.10.711-2	Screw the test gag into the cap or lever and tighten.	Torque wrench	

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9.13 Assembly of the test gag / Assembly long / Test gag

Illustrations	Description	Aids / Tools	
Figure 9.10.711-1	Grease the sealing surface of the long bolt.	Brush Halocarbon (OI-56 S / 60H)	
Figure 9 10 711-2	Put on the sealing ring and grease it as well.	Brush Halocarbon (OI-56 S / 60H)	public
Figure 9.10.711-2	Screw the test gag into the cap or lever and tighten. Attach a red flag with the inscription "blocked" onto the chain of the long screw.	Torque wrench	

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9.14 Assembly of the O-ring damper

9.14.1 O-Ring damper H2 (J65)

Illustrations	Description	Aids / Tools
Figure 9 14 1-1	Individual parts of the O-ring damper H2 (J65)	
	Put the support sleeve onto the	
Figure 9.14.1-2	adjusting screw.	
	Put O-ring onto the spindle over	
	the support sleeve. The O-ring must not sit on the cross hole or a thread, if this is present.	

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Standard	Assembly instructions for series 441, 441 Full hozzle, 458, 129, 133 types $140, 124, 546$	Page 59/63

Assembly instructions for series 441, 441 Full nozzle, 458, 429, 433, types 440, 424, 546

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Illustrations	Description	Aids / Tools
Figure 9.14.1-4	Put the counter ring onto the O-ring or support sleeve.	
Figure 9.14.1-5	Put pressure spring onto the counter ring.	

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Global	LESER Glob	al Standard	-0	LGS 4101
Standard	429, 433, types	440, 424, 546	50,	Page 60/63
				1
Illustratio	ns	Description	Aids	s / Tools
Figure 9.1	4.1-6	Grease the cap on the thread.	Brus	sn ocarbon 56 S / 60H)
		Tighten the cap with an open-end spanner	Ope	n-end spanner

Figure 9.14.1-7

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9.14.2 O-ring damper H4 (J66)

Illustrations	Description	Aids / Tools
Figure 9.14.2-1	Individual parts of the O-ring damper H4 (J66)	
Tigure 9.14.2-2	Fasten the O-ring damper on the spindle with a steel pin and retaining clip. Then assemble the H4 lever cover as described in 12.3.	

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Standard Assembly instructions for series 441, 429, 433, types 440, 4	429, 433, types 440, 424, 546	
		· · · · · · · · ·
Illustrations	Description	Aids / Tools
Figure 9.14.23	ring damper H4	
Figure 9.14.2-3	Put the first O-ring -	
Firme 242 4	Put the first O-ring - counter ring - second O- ring - support sleeve - spring - cap onto the lever one after the other.	

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9.15 Testing the seal tightness of the back seal P21 (seal tightness to the outside)

This test is performed on <u>every gas-tight valve</u> after its assembly.

9.16 Sealing the valve

Illustrations Des	scription	Aids / Tools
Index difference Joint If st hole bon Oth be v wor Clos hole and dire the If clis if clis and dire the If clis if clis if clis and dire the If clis if clis if clis afte	tructurally possible (sealing le/lug on cap/lever and nnet exist), seal the valve. herwise sealing lugs must welded on at the closest rkstation. bely connect the sealing le or lug from the cap/lever d bonnet in a clockwise ection and seal the ends of e wire with a lead seal. classification approvals (TÜV c.) are required, then seal erwards.	Sealing pliers Lead seal Seal wire

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