Contents

12.1 Introduction

A number of worldwide recognised codes and standards require specific markings on the nameplate and body of the safety valve. The scope of this chapter is to provide an overview about the markings on LESER safety valves and to describe which information can be found where on the safety valve.

Markings that are required by codes and standards as well as LESER standard markings are considered “standard” at LESER. Additional markings on customer request are listed as “Option Code” in this document.

12.2 Purpose of Markings

Markings on safety valves have different purposes. The following table lists some purposes exemplarily:

Purpose	Example
Identification of approvals	TÜV-approval no.; UV-Stamp
Identification of the valve	Model-No., Serial-No., Tag-No.
Tracing of materials	Heat-No., Material Code-No.
Identification of performance features	Coefficient of discharge, capacities
Identification of sizes	Nominal diameter
Identification of the pressure rating	PN, CL
Identification of the application	Steam, gases, liquids
Product liability	Stamped seal
Material identification	Material designation
Identification of parts	Part-No.
Identification of service conditions	Set pressure, CDTP, back pressure, temperature
Identification of manufacturer	LESER
Identification of casting supplier	A

Table 12.2-1: Purpose of markings

12.3 Markings on Nameplates

Every safety valve has to be marked with a name plate. Several codes and standards contain requirements for the marking of nameplates, e.g.:

- ISO 4126-1, chapter 10.2
- ASME Section XIII, chapter 3.9
- AD Merkblatt 2000 A2, chapter 9
- VdTÜV Merkblatt SV100, chapter 8
- API 526, Appendix B

These codes and standards differ in some requirements. LESER combines these requirements and uses only one nameplate which fulfils all requirements.
The LESER Name plate for Global Application NGA is the first name plate worldwide, which fulfils all requirements of the leading international codes and standards. Basically the LESER NGA is valid worldwide, but additional country-specific requirements e.g. for Russia or Canada have to be considered.

Fixing of NGA
The LESER Name plate for Global Application is spot welded at the bonnet of the safety valve, or at the outlet body (Series 437 and Type 481).

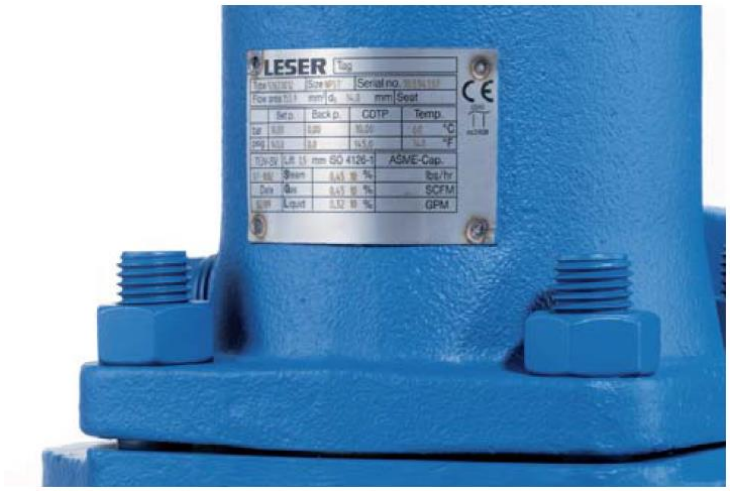

Figure 12.3-1: LESER Nameplate for Global Application "NGA"

12.3.1 Current LESER Nameplates for Spring Loaded Safety Valves

LESER-Nameplate for global application "NGA", valid since January 2009
Dimensions: 60 x 40 mm/ 2,36 x 1,58 in

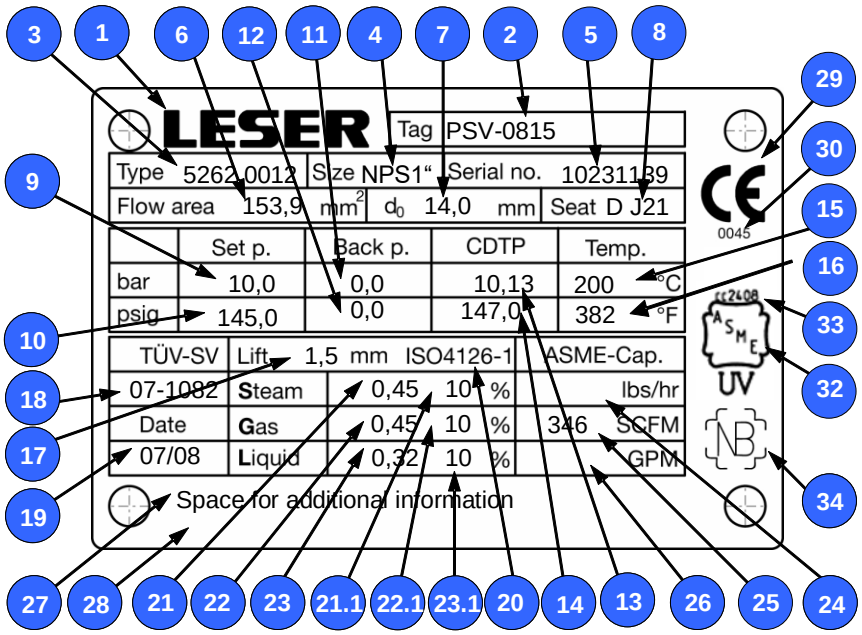

Figure 12.3.1-1: LESER Nameplate for Global Application "NGA", valid since January 2009

For an explanation of the individual nameplate entries refer to table 12.3.1-1.

No.	Field name	Description	ISO 4126-1	VdTÜV/ AD2000 A2	ASME XIII	API 526	Standard/ Option Code
1	LESER	Name of manufacturer			X	X	*
2	Tag	Optional marking of valve (customer's specifications)					*
3	Type	Type number (article number)	X		X	X	*
4	Size	Nominal diameter		X	X	X	*
5	Serial no.	Internal No. for Identification of the safety valve				X	*
6	Flow area	Flow area in mm²	X				*
7	do	Flow diameter in mm		X			*
8	Seat	Identification of the soft seal material Code letter O-Ring-Disc + Option code No entry: metal-to-metal				X	*
9	Set p. - bar	Set pressure of the safety valve in bar	X	X			*
10	Set p. - psig	Set pressure of the safety valve in psig			X	X	*
11	Back p. - bar	Back pressure in bar					* 3)
12	Back p. - psig	Back pressure in psig				X	* 3)
13	CDTP - bar	Cold differential test pressure in bar	X				*
14	CDTP - psig	Cold differential test pressure in psig			X	X	*
15	Temp. - °C	Temperature in °C (for CDTP)					*
16	Temp. - °F	Temperature in °F (for CDTP)					*
17	Lift -mm	Smallest lift / reduced lift when lift restriction in mm	X				*
18	TÜV-SV	TÜV Approval No. according to the VdTÜV-Merkblatt + List number	X	X			*
19	Date	Date of manufacturing Month/Year		X	X		*
20	ISO 4126-1	Number of the standard	X				*
21	Steam	Certified coefficient of discharge for steam (K_{dr}/ α_w) / reduced coefficient of discharge when lift restriction	X	X			*
21.1	Steam	Opening pressure difference in %	X	X			*
22	Gas	Certified coefficient of discharge for gases(K_{dr}/ α_w) / reduced coefficient of discharge when lift stopper	X	X			*
22.1	Gas	Opening pressure difference in %	X	X			*
23	Liquid	Certified coefficient of discharge for liquids (K_{dr}/ α_w)/ reduced coefficient of discharge when lift restriction	X	X			*
23	Liquid	Opening pressure difference in %	X	X			*
24	ASME-Cap. lbs/h	Capacity for steam [1)]			X	X	N68
25	ASME-Cap. SCFM	Capacity for gases (explicitely: air @ 60°F) [1)]			X	X	N68
26	ASME-Cap. GPM	Capacity for liquids (explicitely: water @ 70°F) [1)]			X	X	N68
27/ 28	Customised	Space for additional customised information, e.g. Option codes bellows, oil and grease-free If repaired valve: Repair-No. Used for pressures in non code units					M16/ M17
29	CE	CE-Marking	X	X			*
30	0045	Registration number of the notified body	X	X			*
31	π	Sign of conformity π acc. to directive 1999/36/EG about Transportable Pressure Equipment Directive 0 (TPED)					[2)]
32	ASME + UV	ASME + UV-Stamp			X		N68
33	cc2408	Code case 2408 for UV-Stamp (UV-stamp is lasered)			X		N68
34	NB	Marking of National Board			X		N68

Table 12.3.1-1: Description of nameplate markings

* = Standard
1) Capacity is marked only for one medium (steam, air or water) according to the service medium of the valve
2) Since January 2012 no longer applied
3) The maximum value of the superimposed back pressure (constant + variable) is marked on the nameplate.

12.3.2 Obsolete LESER Nameplates

LESER has improved the nameplates and continuously adapted to the national and international standards. The following overview of the nameplates is to lighten the identification of older LESER safety valves. In special cases it might help to make a picture of the mane plate and/ or the complete safety valve.

Nameplate before 1990

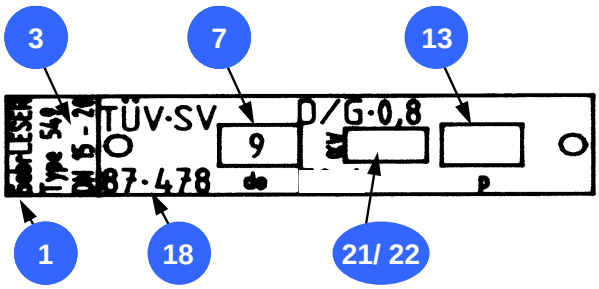

Figure 12.3.2-1: LESER Nameplate before 1990

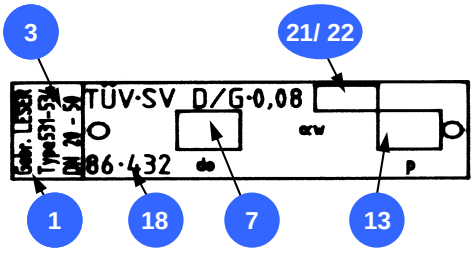

Figure 12.3.2-2: LESER Nameplate before 1990

Nameplate between beginning of 1990 and end of 1997

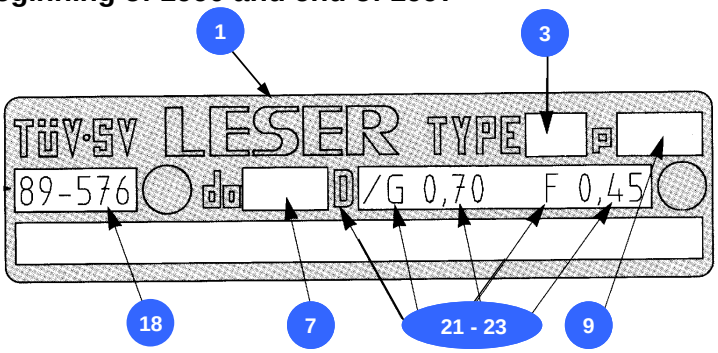

Figure 12.3.2-3: LESER Nameplate 1990 - 1997

Nameplate with UV-Stamp, valid up to July 2002

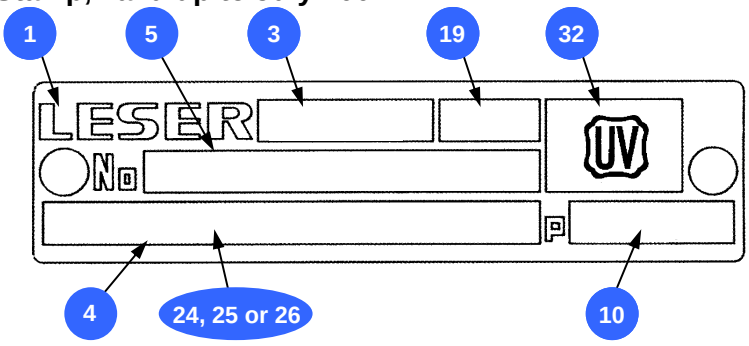

Figure 12.3.2-4: LESER Nameplate with UV stamp until July 2002

LESER-Nameplate “ASME”, valid since July 2002 until 2011

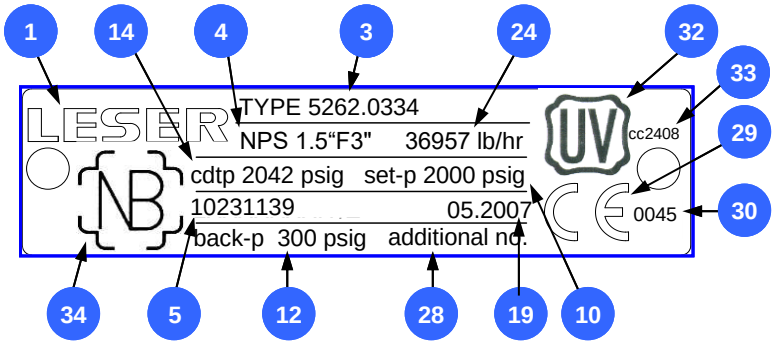

Figure 12.3.2-5: LESER Nameplate “ASME”, valid since July 2002 until March 2011

LESER-Nameplate “CE”, valid since 1998 until 2011

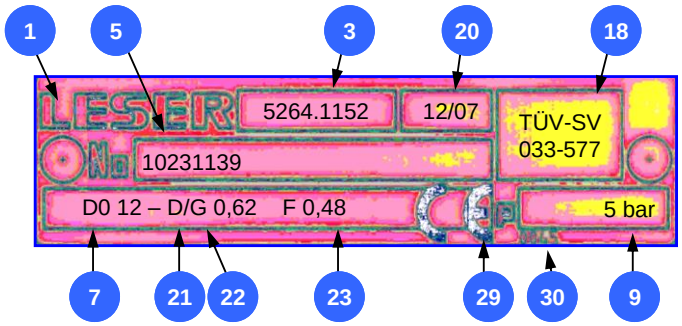

Figure 12.3.2-6: LESER Nameplate “CE”, valid since 1998 until March 2011

12.4 Safety Valve Tag

Dimensions: 85 x 126 mm/ 3,35 x 4,96 in

Attached to every LESER safety valve is a conditionally weatherproof tag. It gives a brief overview about the safety valve and order data for easy identification of the safety valve. It provides additional information to the information on the name plate, e.g. all option codes describing the configuration of the safety valves. Also the installed spring part number is printed on the tag.

The tag is fastened with a plastic clip at the bore hole of the lifting lever respectively at a bore hole of the outlet flange. It may remain at the valve or be stored in a proper location for documentation and future reference.

Figure 12.4-1: LESER Safety valve tag

No.	Field name	Description	Standard/ Option Code
1	Purchase Order No.	Your order number	*
2	Item	Your item number	M25
3	Further SV-Info	Space for your optional information as e.g. installation location, etc. (max. 3 x 30 letters)	M25
4	LESER-Job-No.	LESER-Job-Number	*
5	LESER-item-No.	LESER item number	*
6	Art.-No.	Article-Number	*
7	Tag.-No.	Your optional marking of the valve (max. 30 letters)	*
8	Option Code	All option codes for the safety valve; identify connections and options.	*
9	Spring No.	Spring(s) fitted in safety valve	*
10	Set pressure	Set pressure of valve	*
11	CDTP	Cold differential test pressure	*
12	Body material	Material of safety valve body	*
13	Nominal size - Inlet	Description of safety valve connection	*
14	Nominal size - Outlet	Description of safety valve connection	*
15	Pressure rating - Inlet	Description of safety valve connection	*
16	Pressure rating - Outlet	Description of safety valve connection	*
17	Serial-No.	Number for identification	*
18	LESER-Job-No.	LESER-Job-Number.	*
19	Item-No.	LESER-Job-Number	*
20	Barcode	For LESER-internal identification of the item	*

Table 12.4-1: Description of tag markings

* = Standard information is contained on the tag as a standard
Option Code = information is added to the tag by applying the Option Code

12.5 Markings on the Safety Valve

Different parts of the safety valve have to be marked with specific information. In different standards the marking of the body is defined, e.g.:

- ISO 4126-1, chapter 10
- ASME Code Section XIII
- AD Merkblatt 2000 A4, chapter 7
- VdTÜV Merkblatt SV100, chapter 8

These standards differ in some requirements. It is shown which of the stated standards requires which information on the safety valve. LESER combines these requirements so every safety valve can be used worldwide.
Furthermore LESER provides the customer to add optional markings on the safety valve.

12.5.1 Markings on Flanged Safety Valves

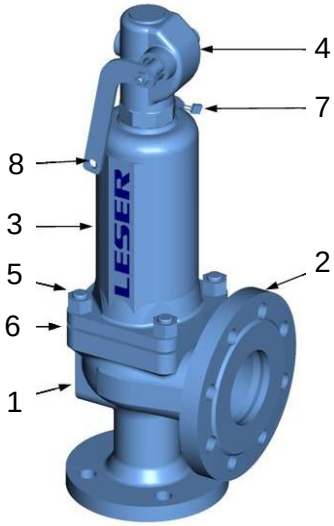

Figure 12.5.1-1: Flanged Safety Valve

No.	Parts of safety valve	Markings on Safety valve	ISO 4126-1	AD 2000 A2	ASME XIII	Standard/ Option Code
1	Body	Mark of valve manufacturer (“GL”)	X	X		*
		Material-No.	X	X		*
		LESER-Part-ID				*
		Arrow (flow direction)	X			*
		Date of casting		X		*
		Nominal diameter (inlet) DN/ NPS	X	X	X	*
		Nominal pressure (inlet) PN/ CL		X		*
		Heat No.				*
		Foundry sign		X		*
2	Outlet flange	Optional customised marking with stamps:				
		Stamped, top of outlet flange				M26
		Stamped, outlet flange sideward				M39
		Stamped, bottom of outlet flange				M42
		Stamped, inlet flange sideward				M31
		Stamped, 10 mm-type height				M32
3	Bonnet	Material-No.	X	X		*
		Mark of valve manufacturer (“GL”)	X	X		*
		LESER-Part-ID	X			*
		Date of casting		X		*
4	Lifting device/ cap	Material-no.	X	X		*
		Mark of valve manufacturer (“GL”)	X	X		*
		LESER Part-ID				*
		LESER material code (cap) or date of casting (lever)				*
5	Stud/ Hex. Nut	Property class				*
		Manufacturers sign				*
6	Nameplate	For details please see “Nameplates”, Section 3	X	X	X	*
7	Seal	Stamp of “GL”, “TÜV”, a classification society or an authorised assembler	X	X	X	*
8	Location for safety valve tag	For details please see “Safety valve tag”, Section 4				*

Table 12.5.1-1: Markings on flanged safety valves

* = Standard information is contained on the tag as a standard
Option Code = information is added to the tag by applying the Option Code

12.5.2 Markings on Threaded Safety Valves

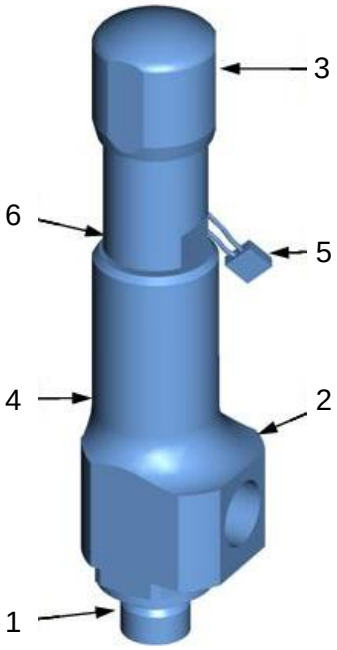

Figure 12.5.2-1: Threaded safety valve

No.	Parts on safety valve	Markings on Safety valve	ISO 4126-1	AD 2000 A2	ASME XIII	Standard/ Option Code
1	Body	Mark of valve manufacturer (“GL”)	X	X		*
		Nominal diameter (inlet) DN/ NPS	X	X	X	*
		Nominal pressure (inlet) PN/ CL		X		*
		Material-No.	X	X		*
		"GL" works inspector sign				*
		LESER material code				*
		Optional customised stamps, inlet body				M27
2	Outlet Body	Mark of valve manufacturer (“GL”)		X		*
		Material-No.	X	X		*
		LESER-Part-ID				*
		Arrow flow direction	X			*
		If milled: LESER-Code				*
		If casted: Date of casting		X		*
		Heat no.				*
		Foundry sign		X		*
3	Lifting device/ cap	Material-No.	X	X		*
		Mark of valve manufacturer (“GL”)	X	X		*
		LESER-Part-ID				*
		If milled: LESER-Code				*
		If casted: Date of casting; Heat no.		X		*
4	Nameplate	For details please see “Nameplates” Section 3	X	X	X	*
5	Seal	Stamp of “GL”, “TÜV”, a classification society or an authorised assembler	X	X	X	*
6	Location for safety valve tag	For details please see “Safety valve tag” Section 4				*

Table 12.5.2-1: Markings on threaded safety valves

* = Standard information is contained on the tag as a standard
Option Code = information is added to the tag by applying the Option Code

12.6 Optional Customised Markings

LESER also offers the following optional markings:

Optional marking	Further information
Marking on nameplate deviating from standard	Please see 12.3.1 "Current LESER Nameplates for Spring Loaded Safety Valves"; field 27, 28
Additional information on the safety valve tag	Please see 12.4 "Safety Valve Tag" ; field 2, 3
Additional information on flanged safety valves	Please see 12.5.1 "Marking on Flanged Safety Valves" field 2
Additional information on threaded safety valves	Please see 12.5.2 "Marking of threaded safety valves" field 1
Marking with stainless steel tag	Please see 12.6.1
Marking with tag provided by customer	Please see 12.6.2

Table 12.6-1: Optional markings

12.6.1 Marking with Stainless Steel Tag

Dimensions W x H [mm]: 58 x 15

An additional stainless steel tag can be used for further information, e.g. customer specific tag-number. The customer defines the input. Depending on the amount of letters it is chosen automatically between a tag with one line (1 x 15 letters) and three lines (3 x 15 letters).

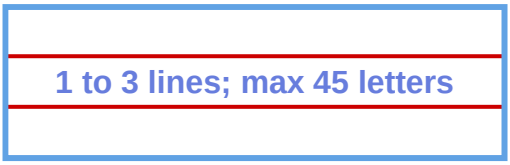

Figure 12.6.1-1: Marking on stainless steel tag

There are different possibilities to fix the additional stainless steel tag on the safety valve:

Fixing of tags	Option Code
With sealing wire in the area of bonnet/cap – lifting device	M29
Spot welded on outlet flange	N69
Spot welded at backside of body	M24
Fixing with grooved pins, top of outlet flange	N11
Fixing with grooved pins instead of spot welding at backside of body	M30

Table 12.6.1-1: Option codes for fixing the stainless steel tag

12.6.2 Marking with Tag Provided by Customer

It is possible to attach a customer specific tag on the valve. To choose this item please use Option Code J75. Please supply the tag latest two weeks before the date of delivery to:

LESER GmbH & Co.KG
Abt. PP – Sonderbearbeitung
Itzehoer Straße 63 – 65
24594 Hohenwestedt
Germany
☏ +49-487127-0

To assign your specific tag to your safety valve please specify following data along with your tag:

- LESER Job-Number (see order confirmation)
- Line item number
- Specific customer tag number, if one item number contains several safety valves with different tag numbers

12.7 Markings on Internal Parts

In accordance with national and international standards every pressure containing part of LESER safety valves is marked permanently. The marking ensures the material identification and the material traceability as a minimum. Material traceability is ensured by a four digit LESER material code number. This number in combination with the material designation allows to identify the correct material certificate for the individual part.
If a material certificate is requested for an individual part after the valve was supplied please use the request form "Request for material test report" from the LESER homepage. For detailed questions please contact certificate@leser.com.

12.7.1 Markings of Disc

Figure 12.7.1-1: Markings of disc

Part	1	2	3
Disc	GL1	1.4404.316L	CODE3924

Explanation
Material code Number
Material designation DIN/ ANSI
Name of the factory authorized expert

12.7.2 Markings of Disc – Short Code for Small Sizes

Figure 12.7.2-1: Markings of disc – short code

Part	1	2	3
Disc	4	C	127

Explanation
Material code Number
Soft seal material marked by a code letter M = metallic seal K = CR (Neoprene) D = EPDM L = FKM (Viton) N = NBR (Perbunan)
Classification of the material by a number 3 = 1.4122 4 = 1.4404/ 316L 6 = 1.4404/ 316L stellited 7 = special material

12.7.3 Markings of the Soft Seal Material on the Disc

In case of a soft sealing disc the soft sealing material is marked by a code letter on the disc as described below. In addition the LESER NGA nameplate is marked with the same code letter, see section 12.3.1.

Soft seal material marked by a code-letter
K = CR (Neoprene)
D = EPDM
L = FKM (Viton)
N = NBR (Perbunan)

Table 12.7.3-1: Code letters for soft seal materials

There are three possibilities to mark the material code of the soft sealing on the disc. Basically the code letter is stamped underneath the disc

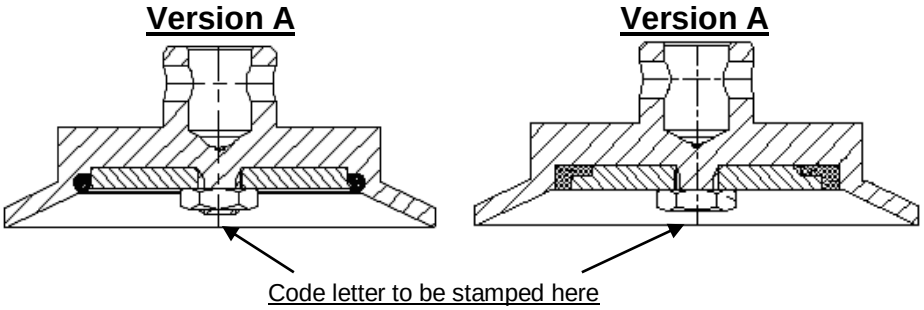

Figure 12.7.3-1: Location of code letter for soft seal

This applies for the following types:

Type	DN	d_0	Marking version
427/429	20 -150	18 - 92	A
431/433	20 -150	18 - 92	A
440-442	20 -150	18 -125	A
455-458	25 -150	15 -110	A
488	25 -100	23 - 92	A
526	25-200	14-161.5	A
532/534	20 -150	20 -125	A

Table 12.7.3-2: Marking versions – type related

In some cases a marking underneath the disc is unfavourable, like discs with sealing plate or if the sealing surface is vulcanized. Then the code letters are placed sideways.

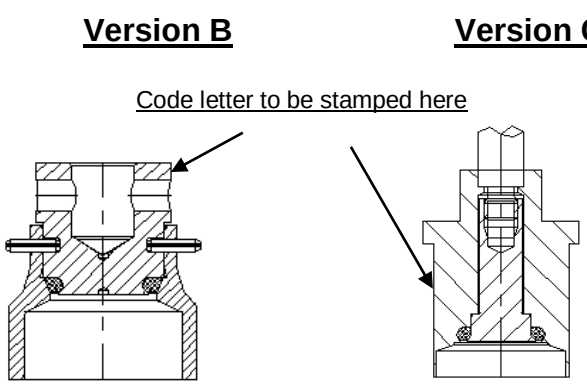

Figure 12.7.3-2: Location of code letter for soft seal

This applies for the following types:

Type	DN	d_0	Marking version
431/433	15	12	B
437/439	-	10	B
438	-	10	C
460	15-20	13-17.5	B
459/462	-	9 – 17.5	B
481	-	10	C

Table 12.7.3-3: Marking versions – type related

12.7.4 Markings of Nozzle

Figure 12.7.4-1: Markings of nozzle

Part	1	2	3	4	5
Nozzle	GL1	d0 28,3	CL600 PN 160	1.4404.316L	CODE3019

Explanation
Material code Number
Material name DIN/ ANSI
Nominal pressure
Flow diameter
Name of the factory authorised expert

12.7.5 Markings of Inlet body

Figure 12.7.5-1: Markings of inlet body

Part	1	2	3	4	5	6
Inlet body	GL1	G1	d_0 10	PN320 CL2500	1.4404.316L	CODE4023

Explanation
Material code Number
Material name DIN/ ANSI
Nominal pressure
Flow diameter
Nominal diameter/ Connection thread
Name of the factory authorized expert

12.7.6 Markings of Spring

The standard ISO 4126-7 chapter 7 defines the marking of safety valve springs.
LESER marks its springs in three different ways:

1. By pad printing
2. By engraving
3. With tag (only for springs d ≤ 3 mm)

Directly on the spring the middle part of the part number consisting of the count number and material code is stated. These four digits are sufficient to identify the spring.

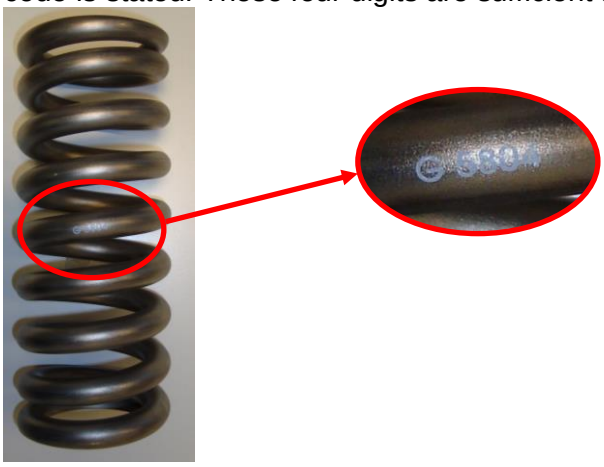

Figure 12.7.6-1: Markings of spring

Part	1	2	3
Spring	G	580	4

Explanation
Material code
Count no.
Spring Supplier code

The marking on the spring allows to identify the complete LESER part number as listed in all spring charts. For identification the count number plus material code is needed. The 11 digit part number of a spring is arranged as follows:

Part	1		2	3		4
Spring	540	.	580	4	.	XXX

Explanation
Defines characteristics of the spring
Material code For standard materials: 1 = 1.1200 Steel 2 = 1.8159/ 1.7102 Heat resistant steel 4 = 1.4310 Stainless steel 7 = Inconel X-750 High temp. Nickel alloy steel 8 = Tungsten H12 High temp. Tungsten alloy steel
Count number
Part group number 540 = standard spring

To find the complete part number of the spring please refer to the relevant spring chart.

12.8 Obsolete LESER Safety Valves

LESER continuously redesigns and enhances its safety valves to provide the customer with the latest state of technology. In some cases types were replaced by new ones. For orientation the obsolete type and the corresponding current type are listed. The obsolete LESER type number can be found on the nameplate.

Obsolete LESER safety valve	Last year of production	Current LESER safety valve
Type 521	1993	Type 421
Type 538	2002	Type 438
Type 539	2005	Type 437
Type 541/ 542	1990	Type 441
Type 547	2004	Type 447
Type 549	1998	Type 459
Type 550	1997	Type 450
Type 560	1997	Type 460
Type 561/ 562	1998	Type 462
Type 451/ 452	1996	Type 455/ 456
Type 453/ 454	1996	Type 457/ 458
Type 448	2004	Type 488
Type 449	2001	Type 484

Table 12.8-1: List of the obsolete and current corresponding LESER safety valves