

## SEMPELL

All applications of stop valves up to a Nominal Diameter of 50 mm.

### Features

- Bonnetless die-forged body.
- One piece body design with packing only.
- Stellite seat.
- Stem nut drive sealed against contamination.
- Simple on-line actuator mounting
- Position indicator.
- Small driving forces.
- Low pressure loss.
- Other designs available.

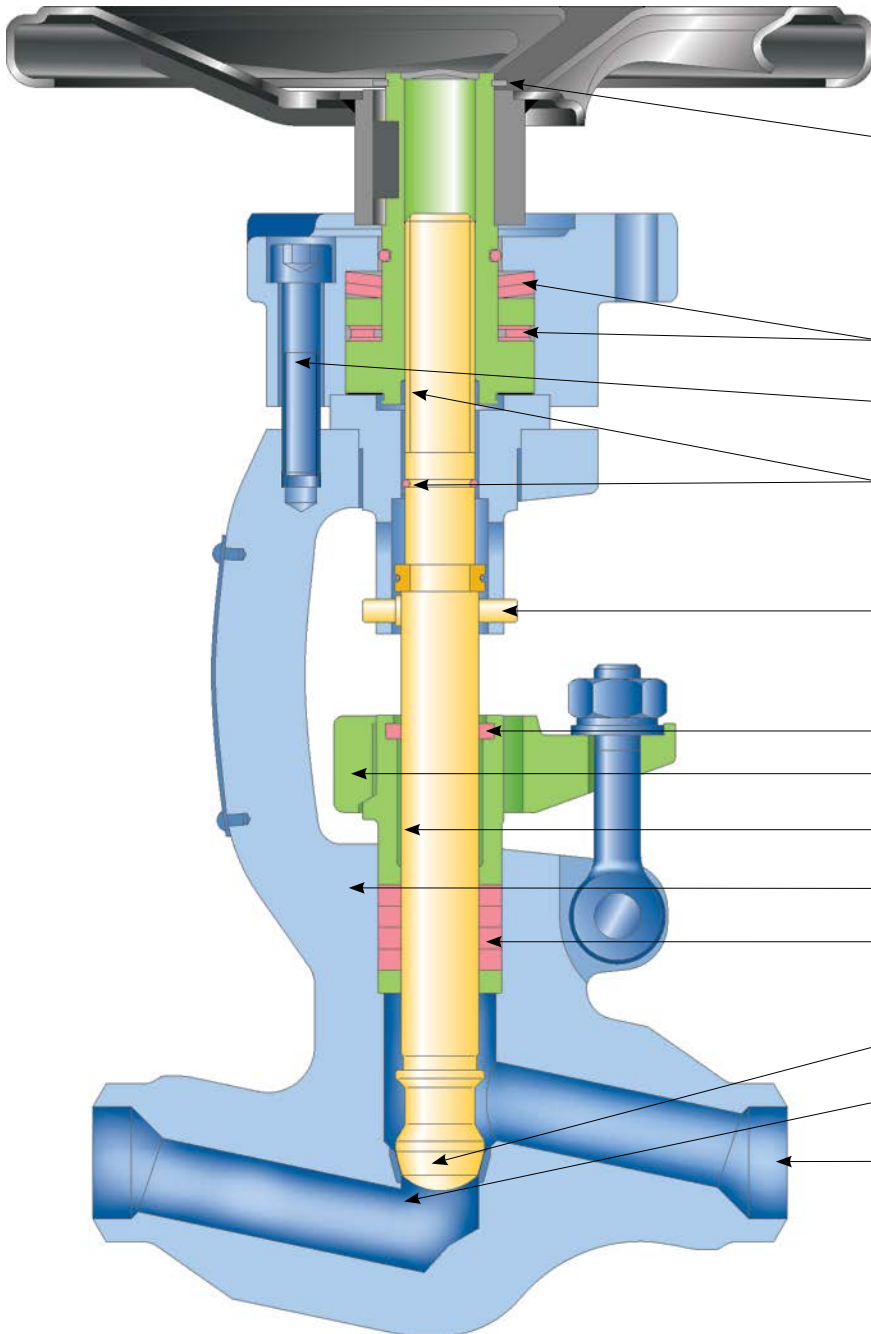


### Technical data

Pressure rating	: PN 100 - 500
Temperature rating	: -20°C to +620°C
Sizes	: DN 10 - 50
Materials	: 1.0460, 1.5415, 1.7335, 1.7380, 1.4922, 1.4903, 1.4550

TÜV - Type-tested

TYPE VA 500  
PN 100-500  
DN 10-50  
HP Stop Valve



Easy changing over to actuators

Low friction bearing extension compensation

For disassembly: only loosen screws, remove inner parts as one unit

Protected long-term lubrication

Visual position indicator

Stripper

Two-piece gland

One-piece, non-rotating stem (17% Cr)

One-piece die-forged body

Pure graphite packing

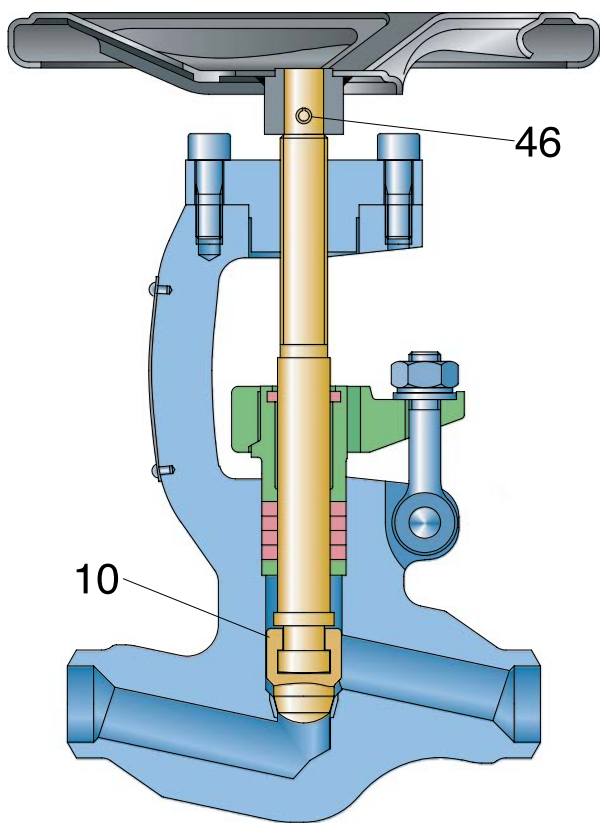
Stellited Body-seat

Low pressure loss

Cylindrical connections: easy to weld and test

### Type VA 501

PN 100 - 500  
DN 10 - 50  
HP - Stop Valve

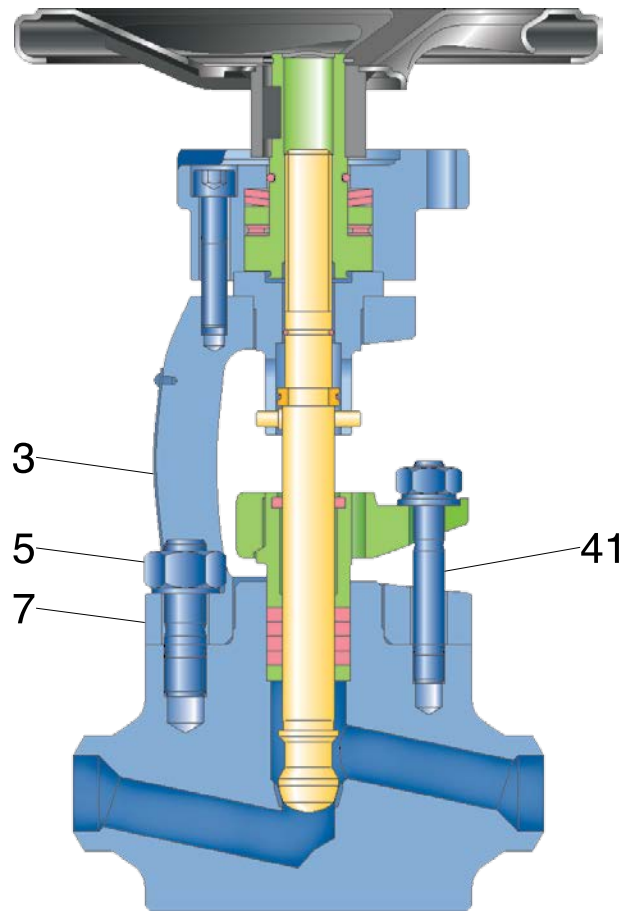


#### Design features Type VA 501

- Rotating stem.
- Loose Stellite-disc.
- Floating Back-seat.
- Only hand operated.
- Upgrade to VA 500 possible.

### Type VA 510

PN 100 - 500  
DN 10 - 50  
HP - Stop Valve

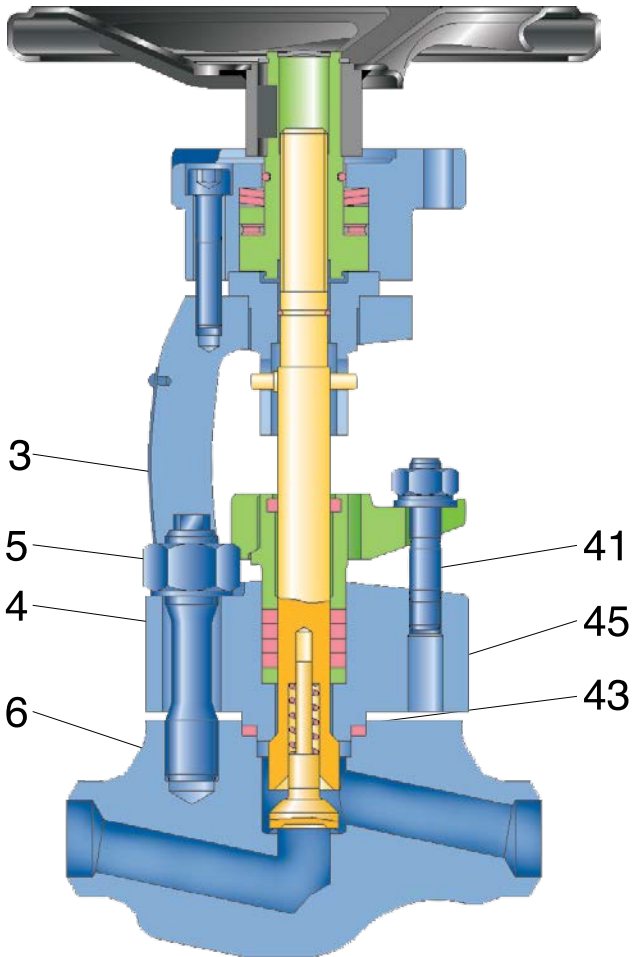


#### Design features Type VA 510

- Two-piece body/bonnet design.
- Body from bar material.
- Many variations of material.

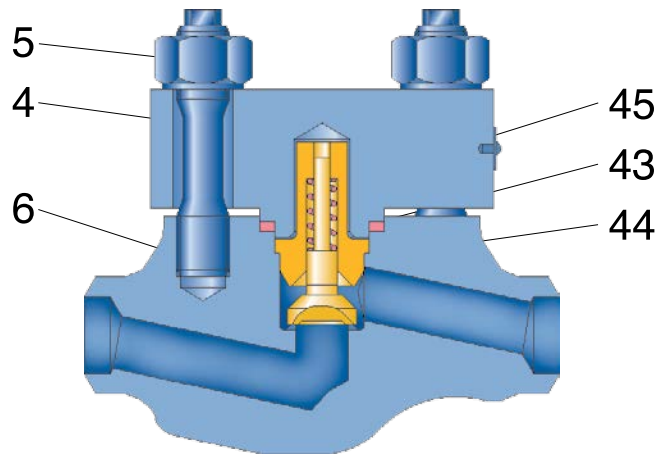
### Type VR 540

PN 100 - 500  
DN 10 - 50  
HP - Screw Down Non Return Valve



### Type VR 500

PN 100 - 500  
DN 10 - 50  
HP - Piston Check Valve



#### Design features Type VR 540

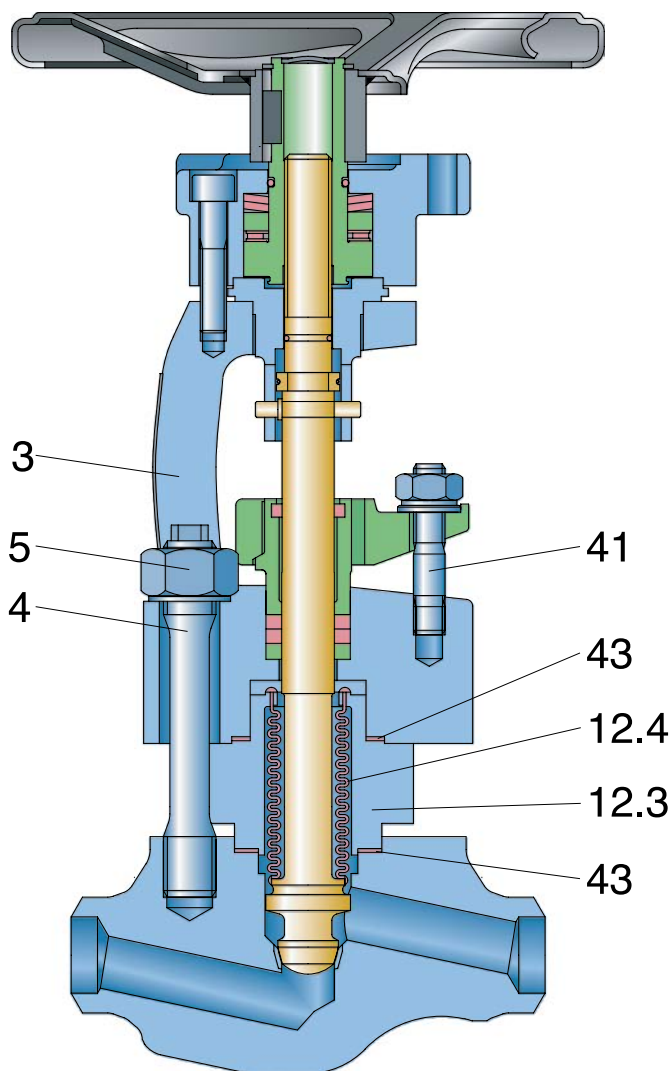
- Body/bonnet two piece design.
- Combined function in one valve.
- Guided disc.

#### Design features Type VR 500

- Body die-forged.
- Spring for vertical installing.
- Flat seat.
- Guided disc.

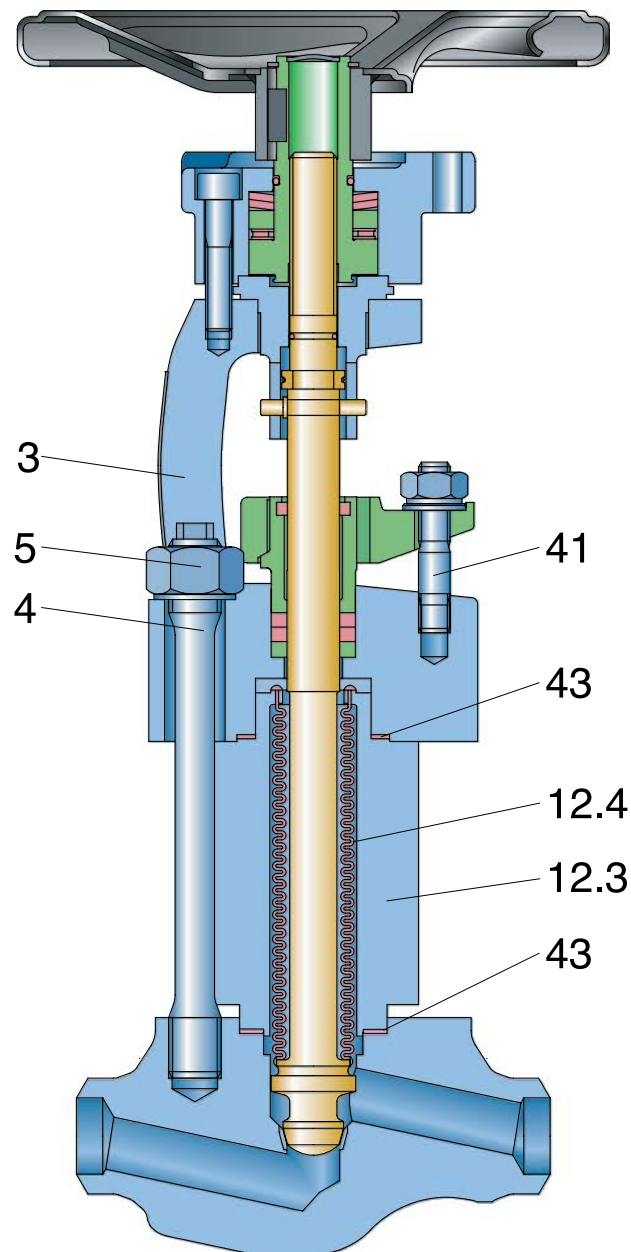
**Type VF 500**

PN 100  
DN 10 - 50  
HP - Stop Valve with Bellows



**Type VF 500**

PN 250  
DN 10 - 50  
HP - Stop Valve with Bellows



**Design features Type VF 500**

- Body die forged.
- Bellows for two pressure ratings.
- Safety stuffing-box.





# VA 500 Serie high-pressure Stop Valves

## Application ranges / Materials

### Application ranges - Din materials for welding ends

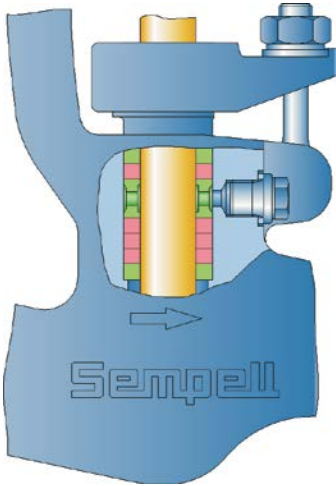
	Body material	DIN Nr.	Design temperature °C																						
			20	250	300	350	400	450	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620		
01	01	01	C22.8	1.0460	543	515	467	397	311	236	137														
11		11	15Mo3	1.5415	543	515	508	501	494	484	463	398	311	236	186	149									
10		10	13CrMo44	1.7335	543	515	508	501	494	484	463	415	365	322	290	255	207	161	132						
13		13	10CrMo910	1.7380	543	515	508	501	494	484	478	476	474	435	377	328	282	240	207	178	153	132	116		
31	31	31	X6CrNiNb1810	1.4550	577	577	577	557	539	525	519	517	515	514	512	511	510								
		15	X20CrMoV121	1.4922						567	561	559	556	548	539	531	522	460	398	336	282	240	199	166	137
		30	X10CrMoVNb91	1.4903						567	561	559	556	548	539	531	522	513	501	449	397	352	311	269	235
		17	X6CrNiTi1810	1.4541	577	570	543	522	505	491	485	483	480	479	478	476	475								
		18	X6CrNiMoTi17122	1.4571	577	577	570	550	532	519	514	513	512	511	510	510	509								
		32	X11CrMoWVNb911	1.4905						567	561	559	556	548	539	531	522	513	505	496	467	418	373	328	287
		33	X3CrNiMoN1713	1.4910						555	548	545	543	541	539	531	522	513	505	496	488	476	442	410	378

- Flanged valves and VF 500 see values acc. to DIN 2401.
- Allowable working pressure (bar) (plain welding ends).
- Max. Test pressure = 1,3 allowable working pressure or 1,5 x PN (max. 750 bar).
- Other materials on request.

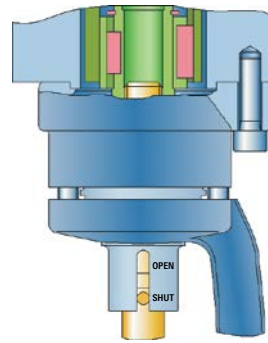
### Materials

Part name	VA 500 / VA 501										
						VA 510					
	VF 500					VF 500					
	VR 500 / VR 540										
	01	11	10	13	31	15	30	17	18	32	33
	Material										
1 Body	1.0460	1.5415	1.7335	1.7380	1.4550	1.4922	1.4903	1.4541	1.4571	1.4905	1.4910
1.1 Body seat						Stellit					
1.3 Welding neck flange	1.0460	1.5415	1.7335	1.7380	1.4550	1.4922	1.4903	1.4541	1.4571	1.4905	1.4910
3 Bonnet / Cover				1.7380	1.4550*						
4 Screw bolt					1.7709	1.4923	1.4986*				
5 Hexagonal nut					1.7258	1.4923	1.4986*				
6 Disc						17%Cr					
7 Stud						Steel					
10 Disc						Stellit					
12 Stem						17% Cr					
12.3 Spacer						Austenit					
12.4 Balanced bellows						Austenit					
13 Base ring						13% Cr					
14 • Packing						Grafit					
15 Gland shaft						13% Cr					
16 Gland flange						13% C					
17 • Stripper						Grafit					
18 Name plate						Austenit					
19 Notched nail						Austenit					
20 Guide bush						13% Cr					
21 • Sealing ring						FPM					
22 Allan bolt						Steel					
23 Threaded bush						SM					
24 Cover						Steel					
25 Parallel key						Steel					
26 Handwheel						Steel					
27 Retaining ring						Spring Steel					
28 Lock washer						Steel					
29 Sealing ring						FPM					
30 Cup spring						Spring steel					
31 Disc ring						13% Cr					
32 Needle bearing						Steel					
33 Slide ring						PTFE					
34 Split ring						17% Cr					
35 Ring						Austenit					
36 Guide bolt						17% Cr					
37 Hexagonal nut						Steel					
38 Washer						Steel					
39 Eye bolt						Steel					
40 Slotted pin						Austenit					
41 Stud						Steel					
42 • Gasket						Austenit / Grafit					
43 • Gasket						Austenit / Grafit					
45 Spring						Inconel					
46 Tightening pin						Spring steel					

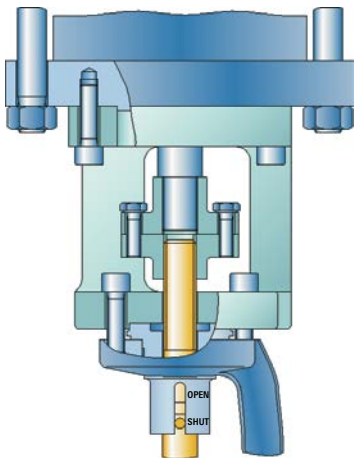
- Commissioning parts Bolts and nuts corrosion protected \* Corresponding type / Body material



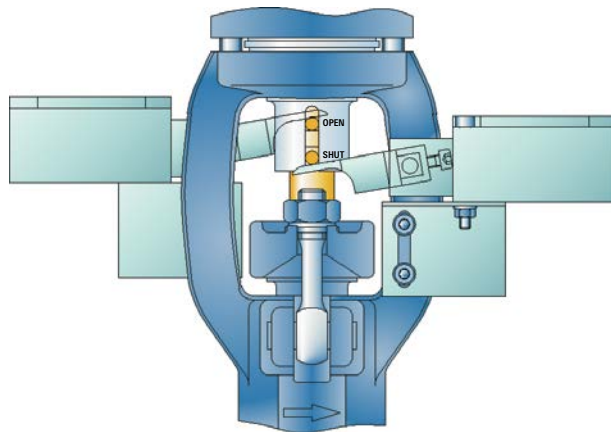
SN 30



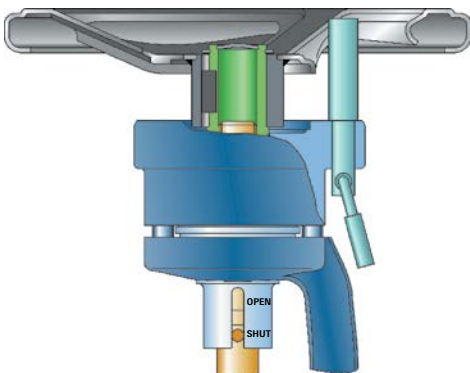
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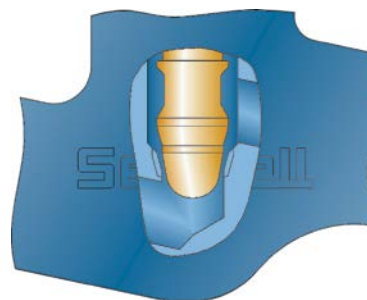
SN 34



SN 36/37

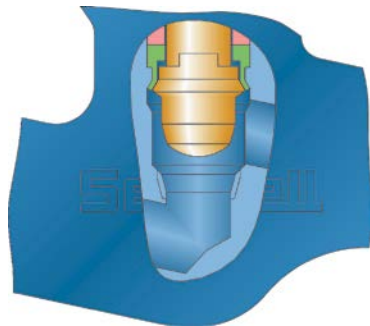


SN 38

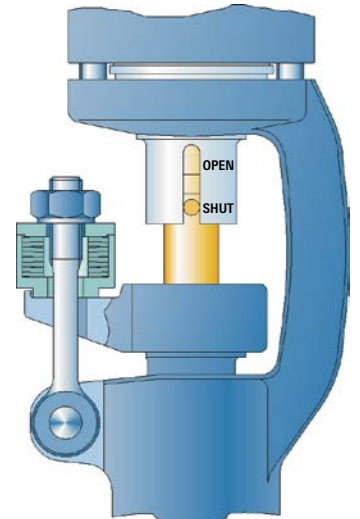


SN 45

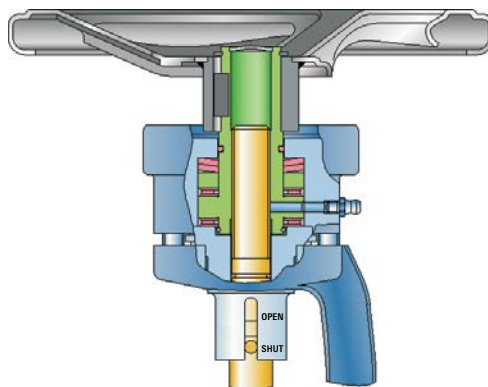




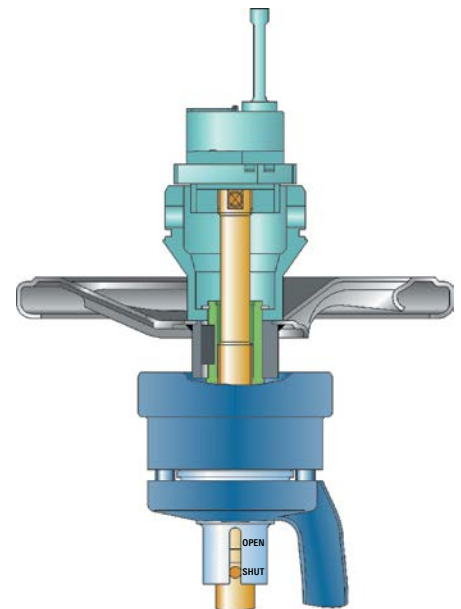
SN 53



SN 160.1



SN 182



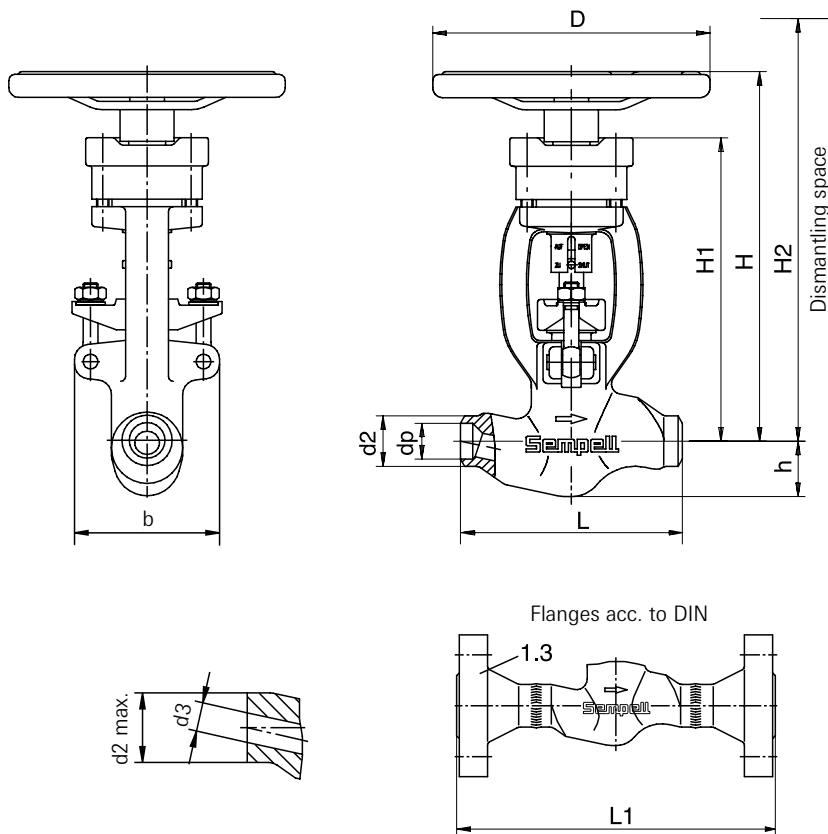
SN 371/373

Accessories

SN 25	Free of non-ferrous metal
SN 30	Water-seal for stuffing box
SN 33	Mounting for electrical actuator acc. ISO 5210
SN 34	Mounting for piston acc. to DIN 3358
SN 36/37	Electrical contactor DIN43694 "SHUT/OPEN" (Standard, explosion protected, nuclear technology)
SN 38	Handwheel locking with padlock
SN 41	Stellite disc
SN 42.1	Body seat cobalt-free
SN 43	Material transition rings
SN 45	Throttling disc
SN 53	Backseat
SN 99	PTFE silk packing
SN 160.1	Spring loaded gland
SN 182	Spindle lubrication
SN 371-373	Valve lock A3-A5

# VA 500 Serie high-pressure Stop Valves

## Dimensions



### Dimensions in mm

PN	VA 500			VA501			VA510			VR540			VR500			VF500			VF500		
	100 - 500			100 - 500			100 - 500			100 - 500			100 - 500			100			250		
DN	10/15	20/25	32/40/50	10/15	20/25	32/40/50	10/15	20/25	32/40/50	10/15	20/25	32/40/50	10/15	20/25	32/40/50	10/15	20/25	32/40/50	10/15	20/25	32/40/50
L	160	180	300	160	180	300	160	180	300	160	180	300	160	180	300	160	180	300	160	180	300
L1	300	360	530	300	360	530	300	360	530	300	360	530	300	360	530	300	360	530	300	360	530
b	120	130	170	120	130	170	140	140	220	130	130	180	130	130	180	130	140	180	130	140	180
H	250	300	455	250	300	455	250	300	455	320	320	475	130	130	185	360	360	520	430	430	630
H1	195	245	385	195	245	385	195	245	385	265	265	405	-	-	-	305	305	450	375	375	550
H2	620	650	820	620	650	820	620	650	820	550	550	580	550	550	580	550	550	620	550	550	730
h	35	45	75	35	45	75	35	45	75	45	45	75	45	45	75	45	45	75	45	45	75
D	200	225	350	200	225	350	200	225	350	225	225	350	-	-	-	225	225	350	225	225	350
R / stroke	5	7,5	10	5	7,5	10	5	7,5	10	3	3	4	-	-	-	4.5	4.5	5	4.5	4.5	5

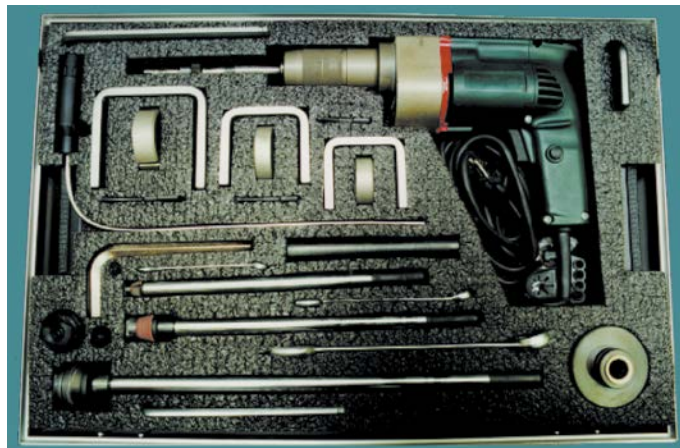
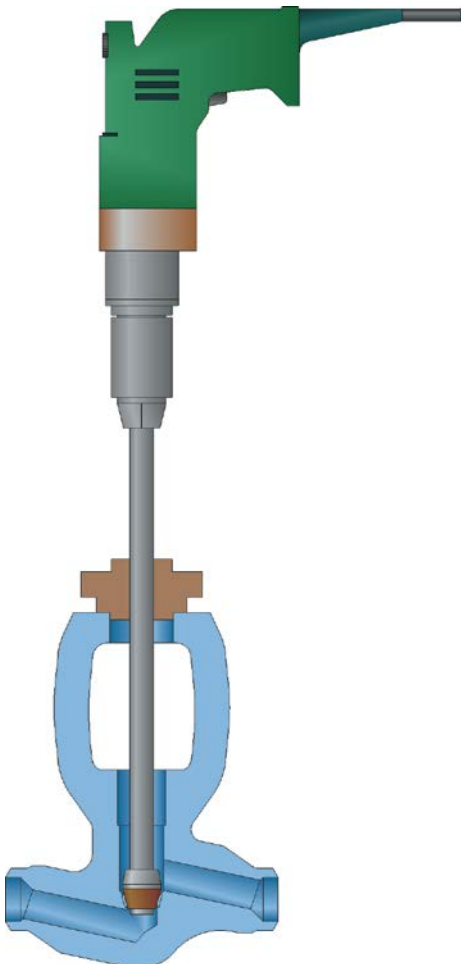
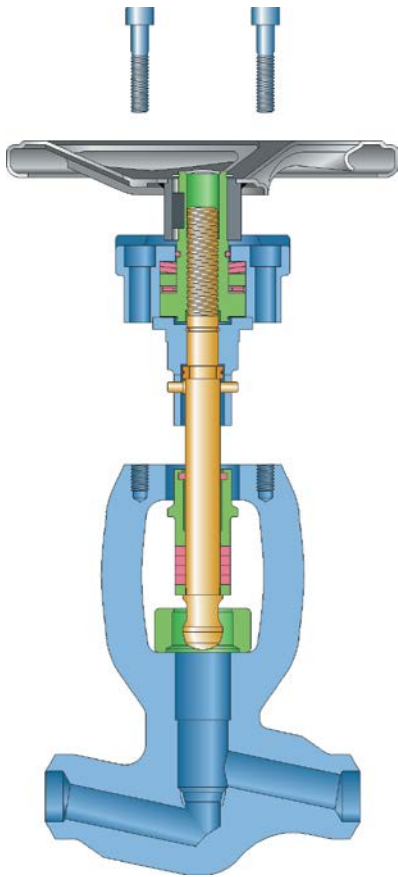
### Welding ends acc. to DIN 3239 in mm

PN	100					160					250					320					400					500				
	10	15	25	40	50	10	15	25	40	50	10	15	25	40	50	10	15	25	40	50	10	15	25	40	50	10	15	25	40	50
dp	13	17	28,5	43	54	13	17	27	41	52,5	12	16	26,5	38,5	45	12	15	24	36	49,5	10	17	29	40	49,5	11,5	16,5	23,5	33,5	45
d2	18	22	35	49	61	18	22	35	49	61	18	22	35	49	61	18	22	35	49	77	18	28	44	61	77	22	32	47	66	86
dp min	6	6	18	27	27	6	6	18	27	27	6	6	18	27	27	6	6	18	27	27	6	6	18	27	27	6	6	18	27	27
d2 max	38	38	54	94	94	38	38	54	94	94	38	38	54	94	94	38	38	54	94	94	38	38	54	94	94	38	38	54	94	94
d3	13	13	20	40	40	13	13	20	40	40	13	13	20	40	40	13	13	20	40	40	13	13	20	40	40	13	13	20	40	40

Socketweld on request

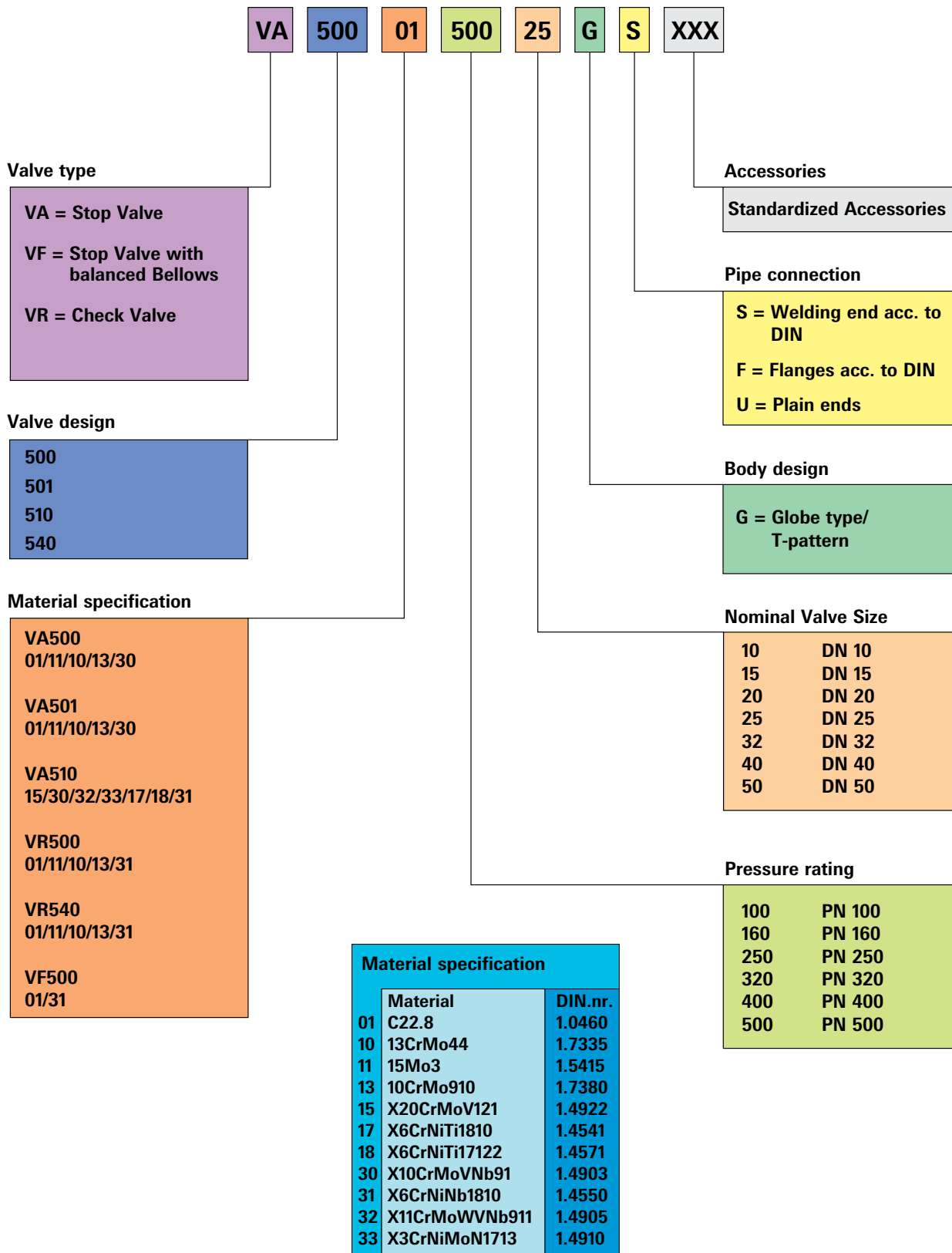
### Weights in kg

PN	Welding Ends					Flanges																							
	100 - 500			100 - 160		250					320					400													
DN	10-15	25	40/50	10	15	25	40	50	10	15	25	40	50	10	15	25	40	50	10	15	25	40	50	10	15	25	40	50	
VA500	8	12	40	11	11	20	52	58	13	14	22	56	65	13	14	24	56	65	13	16	28	69	83	13	16	28	69	83	
VA501	7	10	35	10	10	18	47	53	12	13	20	51	57	12	13	22	51	60	12	15	26	64	78	12	15	26	64	78	
VA510	18	19	64	21	21	27	76	82	23	24	29	80	86	23	24	31	80	89	23	26	35	93	107	23	26	35	93	107	
VR540	18	18	52	21	21	26	64	70	23	24	28	68	74	23	24	30	68	77	23	26	32	81	95	23	26	32	81	95	
VR500	10	10	32	13	13	18	44	50	13	16	20	48	54	15	16	22	48	67	15	18	26	61	75	15	18	26	61	75	
VF500	23	23	62	30	32	45	86	99	32	35	47	88	102																



#### Tool kit

The available maintenance tool kit in metal boxes allows quick and thorough disassembly, maintenance, test and reassembly on all VA 500-Series valves. The necessary overhaul can be reduced to a minimum of time. More information on request.



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